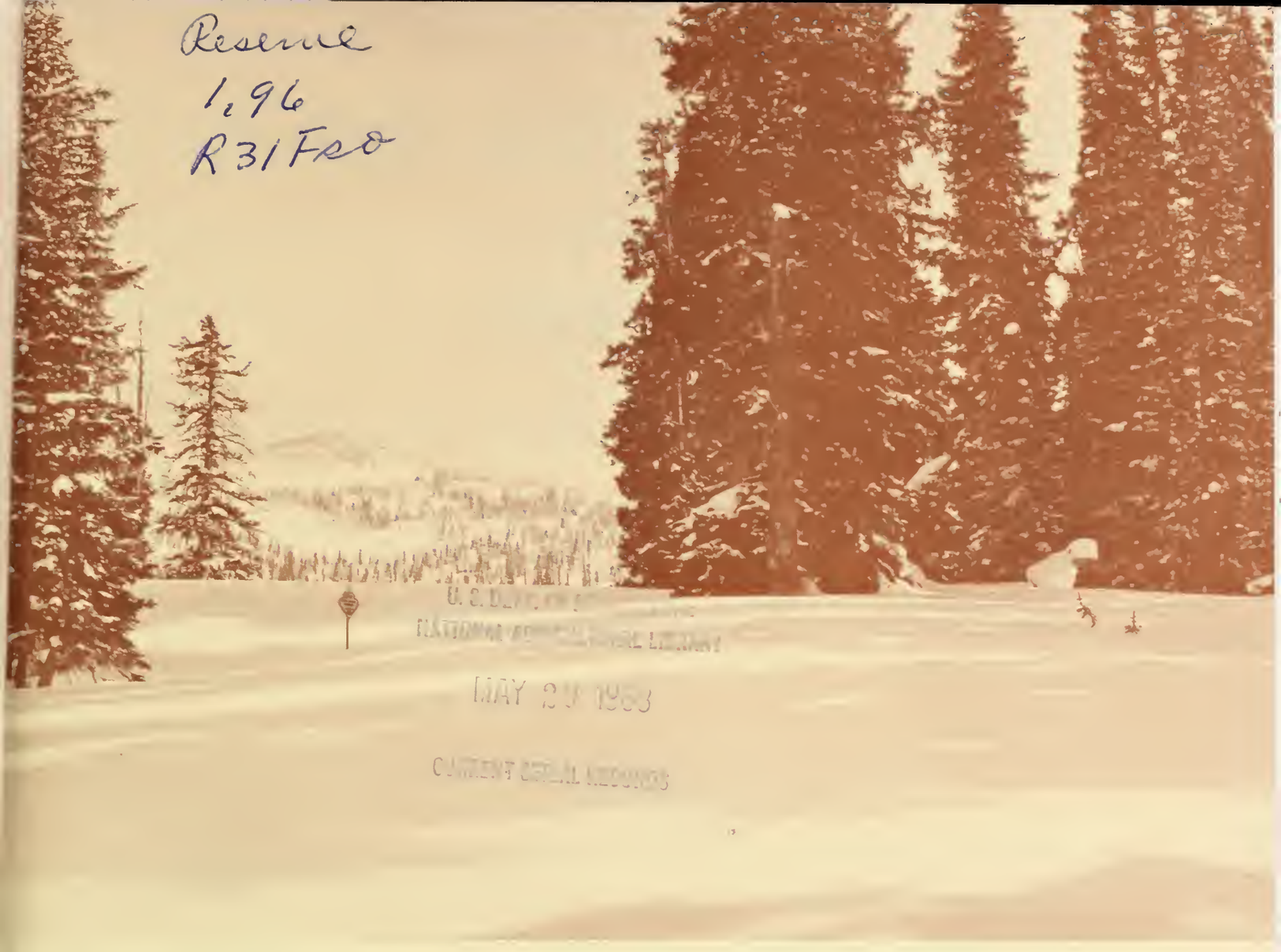


WATER SUPPLY OUTLOOK FOR OREGON

and

FEDERAL - STATE - PRIVATE COOPERATIVE SNOW SURVEYS

UNITED STATES DEPARTMENT of AGRICULTURE···SOIL CONSERVATION SERVICE

and

OREGON STATE UNIVERSITY

and

STATE ENGINEER of OREGON

Data included in this report were obtained by the agencies named above in cooperation with other Federal, State and private organizations.

AS OF
MAY 1, 1968

TO RECIPIENTS OF WATER SUPPLY OUTLOOK REPORTS:

Most of the usable water in western states originates as mountain snowfall. This snowfall accumulates during the winter and spring, several months before the snow melts and appears as streamflow. Since the runoff from precipitation as snow is delayed, estimates of snowmelt runoff can be made well in advance of its occurrence. Streamflow forecasts published in this report are based principally on measurement of the water equivalent of the mountain snowpack.

Forecasts become more accurate as more of the data affecting runoff are measured. All forecasts assume that climatic factors during the remainder of the snow accumulation and melt season as they affect runoff will add to be an effective average. Early season forecasts are therefore subject to a greater change than those made on later dates.

The snow course measurement is obtained by sampling snow depth and water equivalent at surveyed and marked locations in mountain areas. A total of about ten samples are taken at each location. The average of these are reported as snow depth and water equivalent. These measurements are repeated in the same location near the same dates each year.

Snow surveys are made monthly or semi-monthly from January 1 through June 1 in most states. There are about 1400 snow courses in Western United States and in the Columbia Basin in British Columbia. In the near future, it is anticipated that automatic snow water equivalent sensing devices along with radio telemetry will provide a continuous record of snow water equivalent at key locations.

Detailed data on snow course and soil moisture measurements are presented in state and local reports. Other data or reservoir storage, summaries of precipitation, current streamflow, and soil moisture conditions at valley elevations are also included. The report for Western United States presents a broad picture of water supply outlook conditions, including selected streamflow forecasts, summary of snow accumulation to date, and storage in larger reservoirs.

Snow survey and soil moisture data for the period of record are published by the Soil Conservation Service by states about every five years. Data for the current year is summarized in a West-wide basic data summary and published about October 1 of each year.

PUBLISHED BY SOIL CONSERVATION SERVICE

D. A. WILLIAMS, Administrator

The Soil Conservation Service publishes reports following the principal snow survey dates from January 1 through June 1 in cooperation with state water administrators, agricultural experiment stations and others. Copies of the reports for Western United States and all state reports may be obtained from Soil Conservation Service, Western Regional Technical Service Center, Room 507, 701 N. W. Glisan, Portland, Oregon 97209.

Copies of state and local reports may also be obtained from state offices of the Soil Conservation Service in the following states:

STATE	ADDRESS
Alaska	P. O. Box "F", Palmer, Alaska 99645
Arizona	6029 Federal Building, Phoenix, Arizona 85205
Colorado (N. Mex.)	12417 Federal Building, Denver, Colorado 80202
Idaho	P. O. Box 38, Boise, Idaho 83707
Montana	P. O. Box 98, Bozeman, Montana 59715
Nevada	P. O. Box 4850, Reno Nevada 89505
Oregon	1218 S. W. Washington St., Portland, Oregon 97205
Utah	4012 Federal Building, Salt Lake City, Utah 84111
Washington	360 Federal Office Building, Spokane, Washington 99201
Wyoming	P. O. Box 340, Casper, Wyoming 82602

PUBLISHED BY OTHER AGENCIES

Water Supply Outlook reports prepared by other agencies include a report for California by the Water Supply Forecast and Snow Surveys Unit, California Department of Water Resources, P. O. Box 388 , Sacramento , California 95802 --- and for British Columbia by the Department of Lands, Forests and Water Resources, Water Resources Service, Parliament Building, Victoria, British Columbia

USDA-SCS PORTLAND, OREG 1966

WATER SUPPLY OUTLOOK FOR OREGON

and

FEDERAL - STATE - PRIVATE COOPERATIVE SNOW SURVEYS

Issued

MAY 8, 1968

Issued by

D.A. WILLIAMS

ADMINISTRATOR
SOIL CONSERVATION SERVICE
WASHINGTON, D.C.

Released by

A.J. WEBBER

STATE CONSERVATIONIST
SOIL CONSERVATION SERVICE
PORTLAND, OREGON

In Cooperation with

G. BURTON WOOD

DIRECTOR
OREGON AGRICULTURAL
EXPERIMENT STATION

CHRIS L. WHEELER

STATE ENGINEER
STATE OF OREGON

Report prepared by

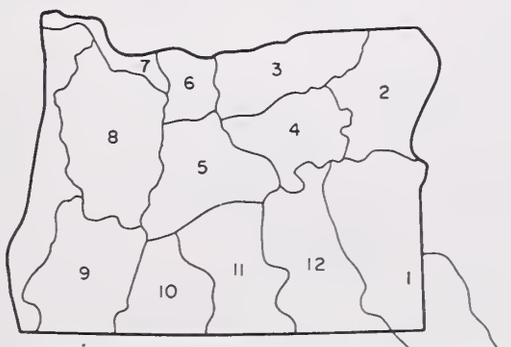
W.T. FROST, Snow Survey Supervisor

and

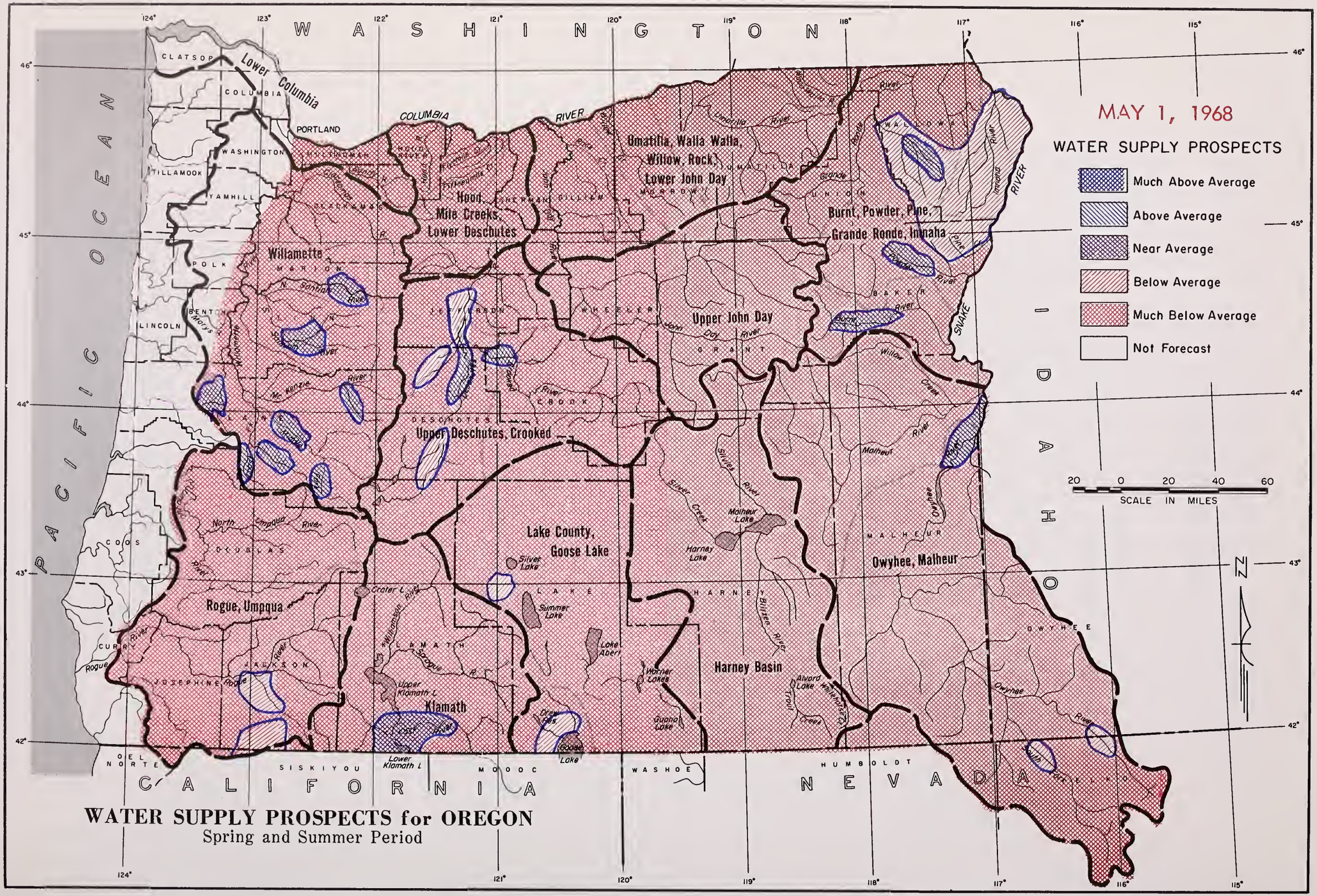
TOMMY A. GEORGE, Assistant Snow Survey Supervisor

SOIL CONSERVATION SERVICE
1218 S.W. WASHINGTON ST.
PORTLAND, OREGON 97205

TABLE OF CONTENTS



WATERSHED AREA LOCATIONS



WATER SUPPLY PROSPECTS for OREGON

Spring and Summer Period

WATER SUPPLY OUTLOOK for OREGON

MAY 1, 1968

The summer of 1948 in Oregon will compare strongly with the drastically dry years of 1926, 1931, 1934 and 1941. Nearly record-low streamflows are forecast for all of the state except the Wallowa mountains, eeven with normal summer weather.

If unusually hot and dry weather conditions, similar to last summer, should recur, most Oregon streams will establish new record-low flows.

Water supplies barely sufficient for this season will be available only to water users where reservoired supplies are available and sufficient. Reservoired water is sufficient only in Upper Klamath Lake, Gerber and Clear Lake reservoirs of Klamath County; Lake Owyhee in Malheur County; Unity reservoir in Baker County; Wallowa Lake in Wallowa County and Prineville reservoir in Crook County. All other irrigation reservoirs contain less water than is needed for a satisfactory season.

PRECIPITATION

Winter precipitation, November through March, as reported by the U. S. Weather Bureau averaged 73 to 90 percent west of the Cascades and in the Wallowa mountain area. Lower amounts, 58 to 63 percent average, occurred in the remainder of the state. April continued the below normal pattern with 62 percent precipitation in Malheur County and 59 percent in the Willamette drainage. Precipitation was lowest in the Deschutes-Crooked and Klamath watersheds where only 18 to 21 percent was measured. All other areas received from 25 to 46 percent of average.

SNOW COVER

Mountain snowpacks have vanished or are extremely limited except at the highest elevations. Snow cover increased at only 16 of the 141 snow courses measured. The best snow cover, 58 percent of the May first average, is in the Wallowa Mountains. The Cascades have about 45 percent snow cover. All other regions have less than two-fifths of the usual snow for this date or practically none as in the case in Malheur, Harney, Lake and Crook Counties. Snow cover in Umatilla, Morrow, Grant and Wheeler Counties is about 10 percent of average.

continued on next page

continued--

SOIL MOISTURE

Soil moisture has been greatly reduced by cool, dry winds and many streams are already at July levels or lower. Water supplies on Oregon range lands are extremely short.

RESERVOIR STORAGE

Stored water supplies in 25 Oregon reservoirs on May first totaled 2,047,100 acre feet or 84 percent of the 15-year average. Inflow to reservoirs has been negligible in April. If maximum drawdown of reservoirs is made, as seems likely, there will be no carryover of water for the 1969 season.

Irrigation water supplies will be extremely short throughout the state except for lands served from the seven reservoirs named. Water supplies can be improved slightly by substantial and unexpected rainfall at critical intervals in the summer.

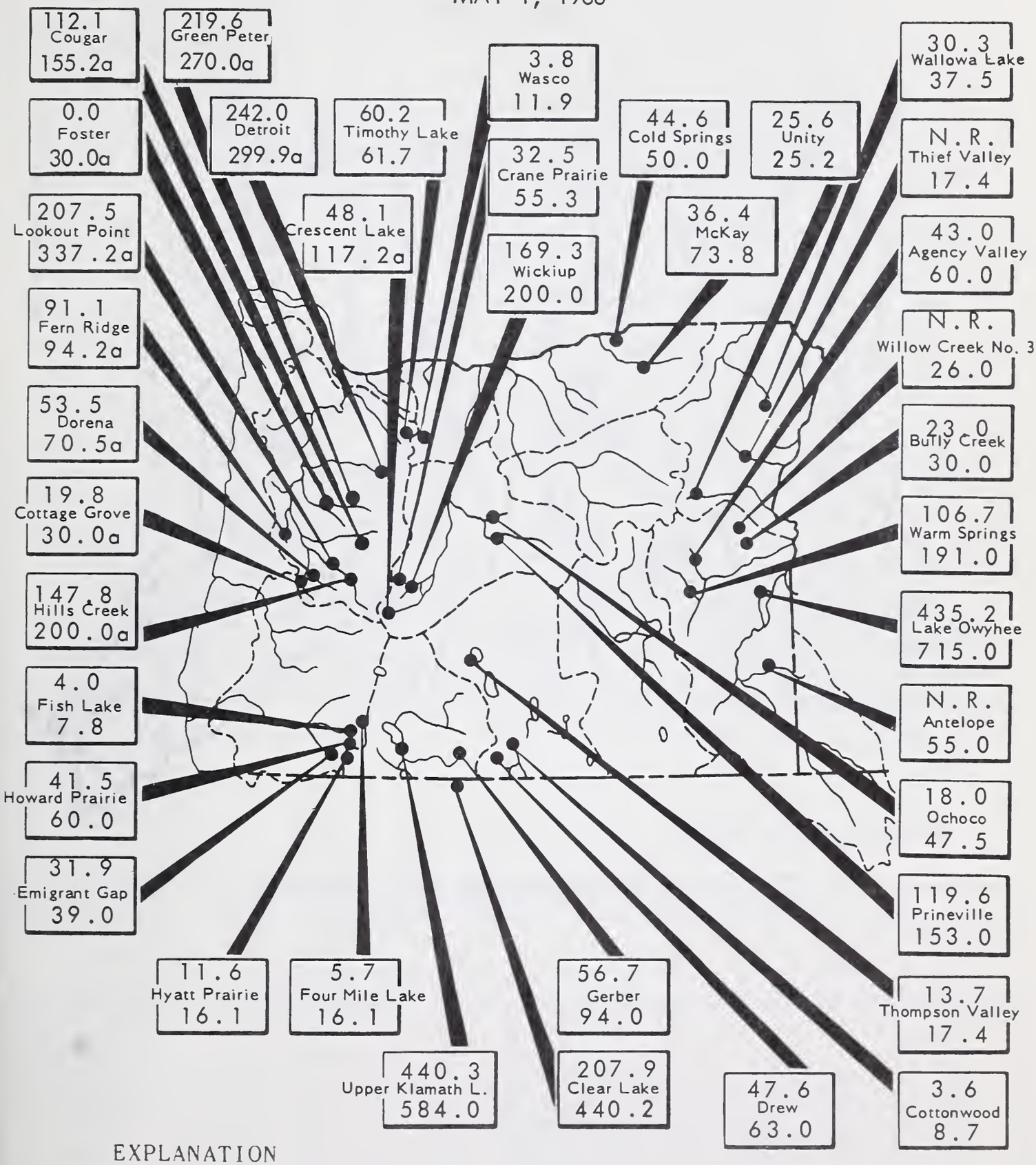
STREAMFLOW

The following representative streamflow forecasts are compared with the 15-year average (1948-62) and assume near average conditions of temperature and precipitation during the runoff period:

Stream Station	Period	Acre Feet	Percent Average
Lake Owyhee Inflow	May-Sept.	32,000	17
Malheur R. near Drewsey	May-Sept.	5,000	14
Burnt R. near Hereford	May-Sept.	2,500	12
Powder River near Baker	May-Sept.	16,000	36
Lostine R. near Lostine	Apr.-Sept.	109,000	83
Grande Ronde R. - La Grande	May-Sept.	29,000	24
South Fork Walla Walla R.	May-Sept.	36,000	62
Umatilla R. at Pendleton	May-Sept.	24,000	25
John Day R. at Prairie City	Apr.-Sept.	20,000	39
Crooked R. near Post	May-Sept.	5,000	10
Deschutes R. at Benham Falls	May-Sept.	260,000	48
Hood R. near Hood River	May-Sept.	140,000	50
Willamette R. at Salem	Apr.-Sept.	2,900,000	52
Rogue R. at Raygold	May-Sept.	385,000	53
Klamath Lake Inflow	May-Sept.	235,000	54
Chewaucan R. near Paisley	Apr.-Sept.	40,000	45
Drews Reservoir Inflow	May-Sept.	2,000	18
Silvies R. near Burns	Apr.-Sept.	15,000	15
Blitzen R. near Frenchglen	Apr.-Sept.	15,000	24

STORAGE STATUS of OREGON RESERVOIRS
usable contents in thousands of acre feet

MAY 1, 1968



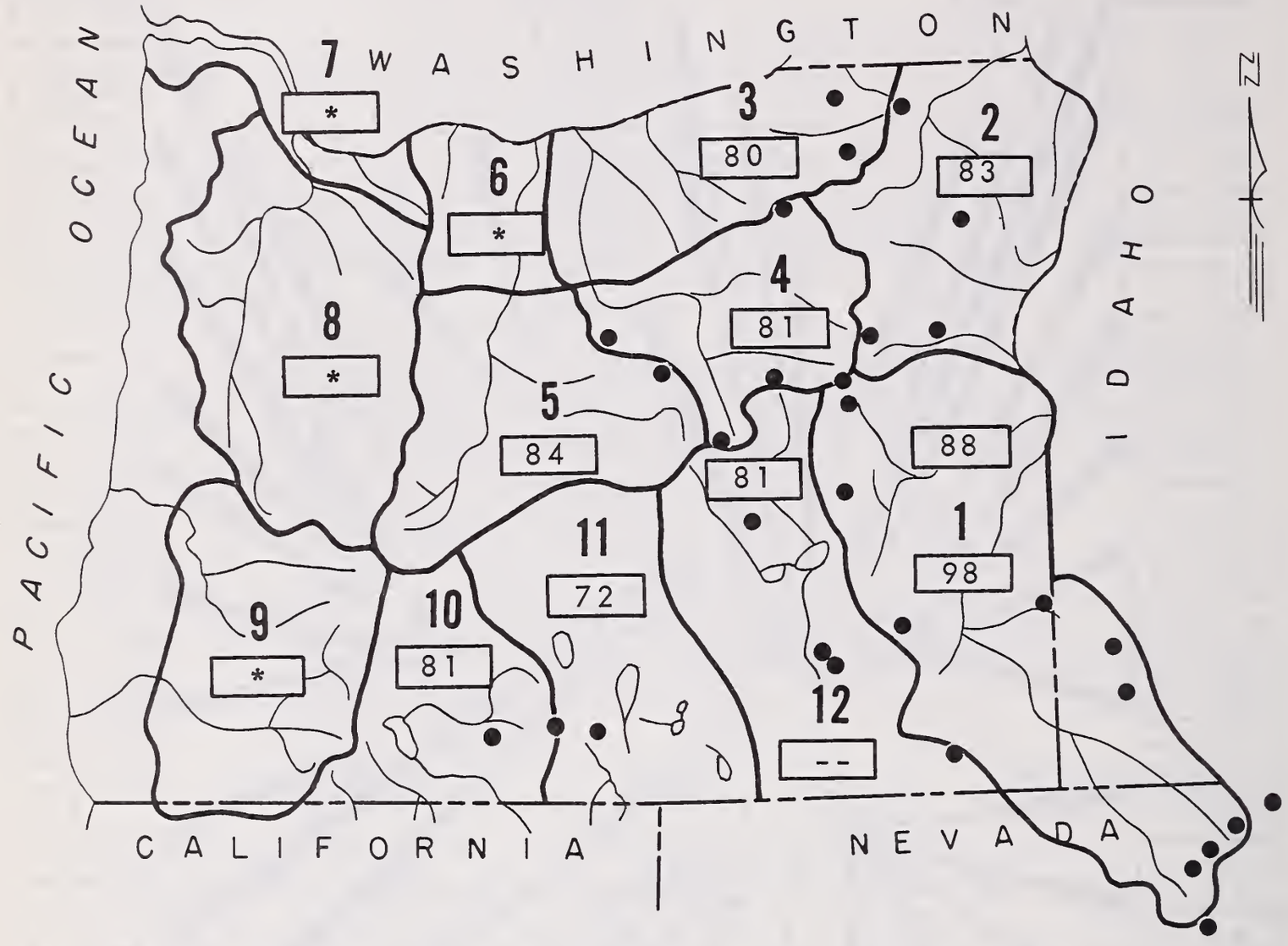
EXPLANATION

687.0 Lake Owyhee 715.0 ---Contents ---Capacity

(a) Multiple purpose reservoir - space reserved for flood runoff.
N. R. - No report.

MOUNTAIN SOIL MOISTURE in OREGON
as percent of capacity

MAY 1, 1968

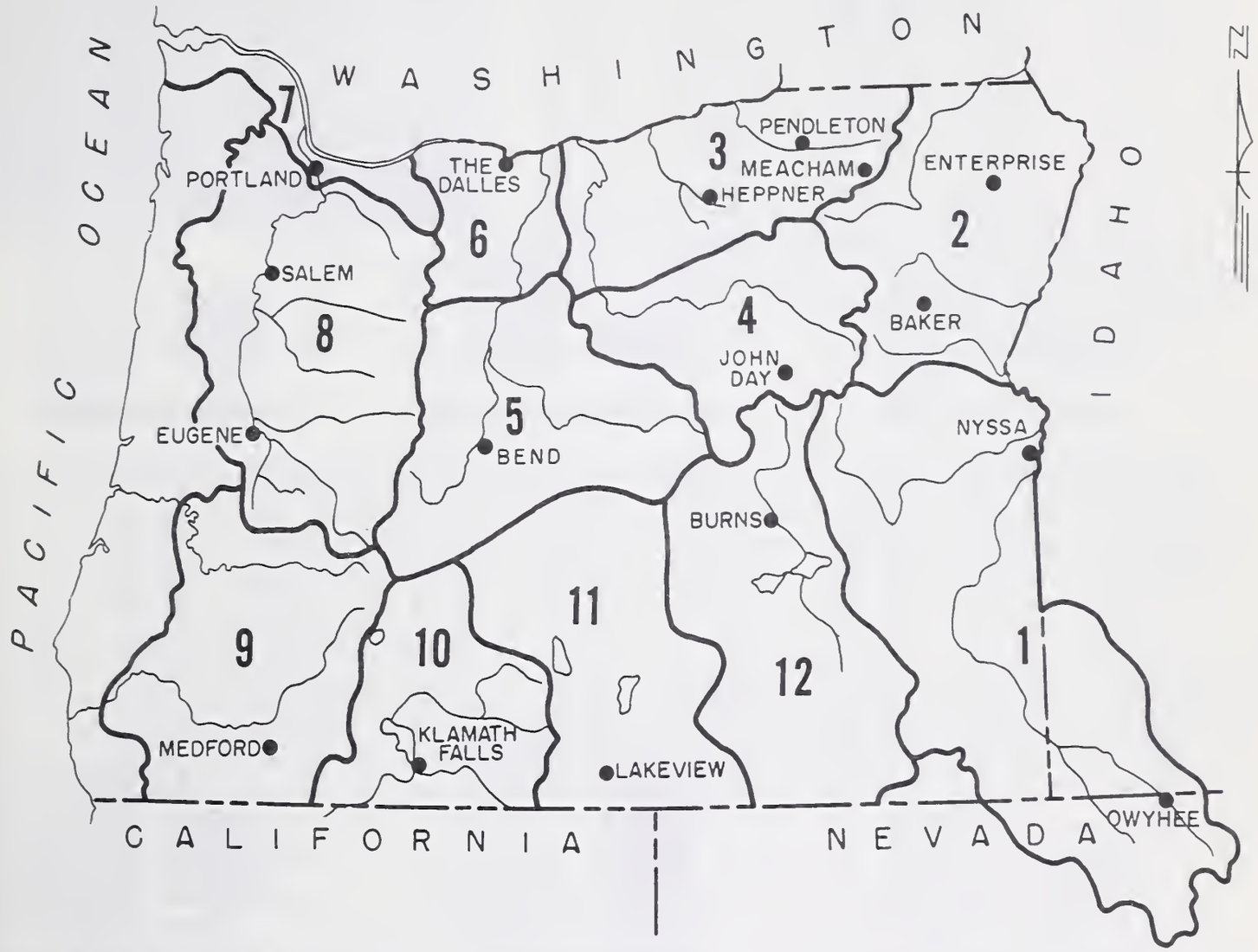


● Soil Moisture Station

**Moisture studies not yet developed in these areas.*

VALLEY PRECIPITATION in OREGON [a]

MAY 1, 1968

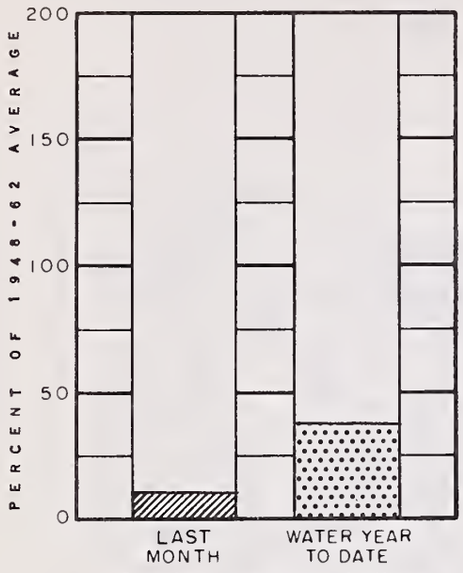


PRECIPITATION as PERCENT of the 1948-62 AVERAGE					
STATION	LAST MONTH	WATER YEAR TO DATE [b]	STATION	LAST MONTH	WATER YEAR TO DATE [b]
Baker Apt.	84	84	Lakeview	18	81
Bend	15	49	Meacham	70	81
Burns	13	72	Medford Apt.	45	76
Enterprise	43	83	Nyssa	23	76
Eugene Apt.	50	85	Pendleton Apt.	15	52
Heppner	21	56	Portland Apt.	81	84
John Day	48	61	Salem Apt.	61	88
Klamath Falls Apt.	28	49	The Dalles	14	60
			Owyhee (Nev.)	111	83

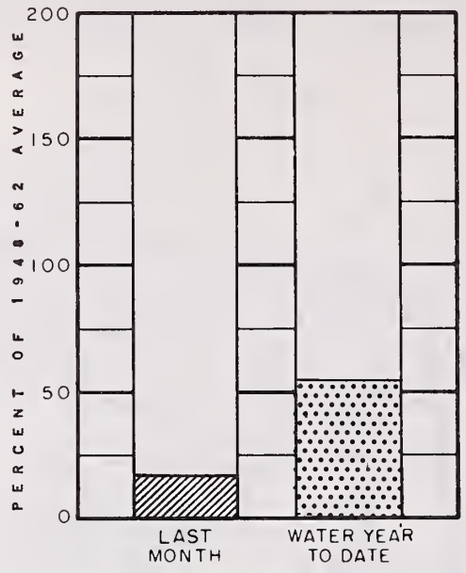
(a) Preliminary data furnished by the U.S. Weather Bureau. (b) Oct. 1 to date. (c) Report delayed.

CURRENT OREGON STREAMFLOW

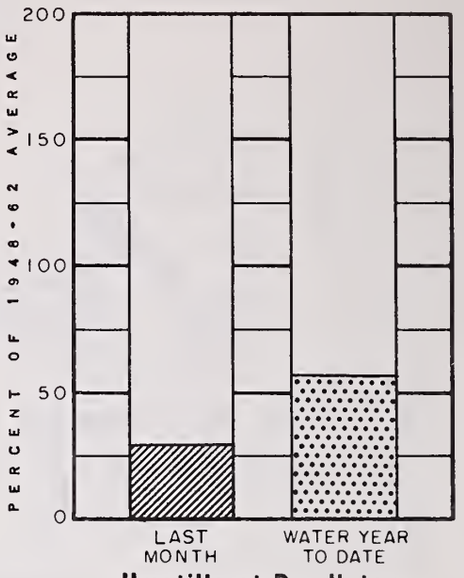
MAY 1, 1968



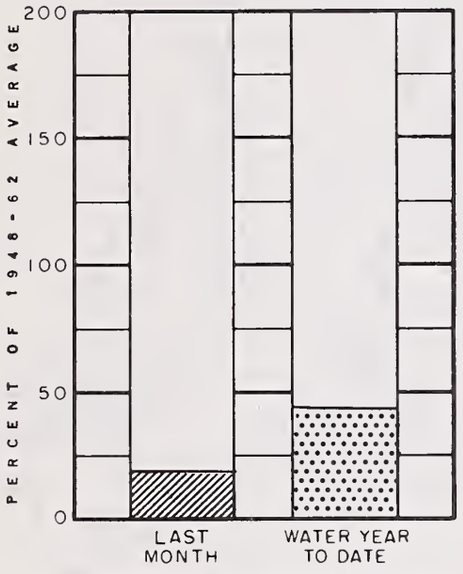
Owyhee Lake net inflow



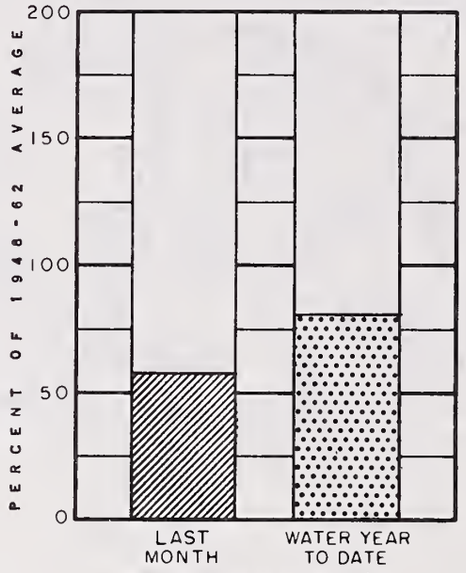
Grande Ronde at La Grande



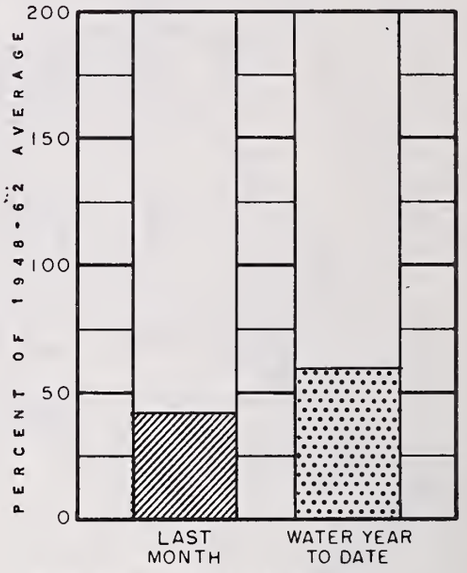
Umatilla at Pendleton



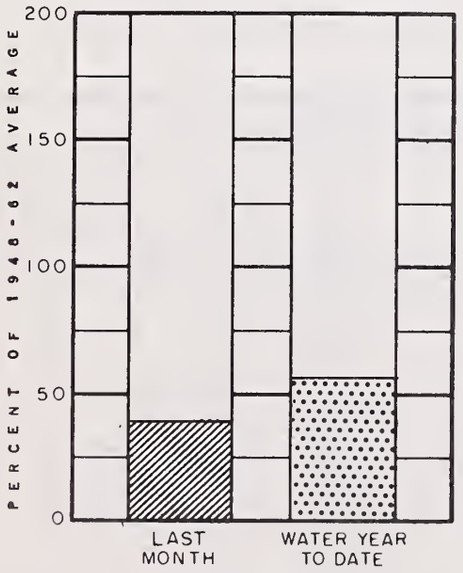
John Day at Service Creek



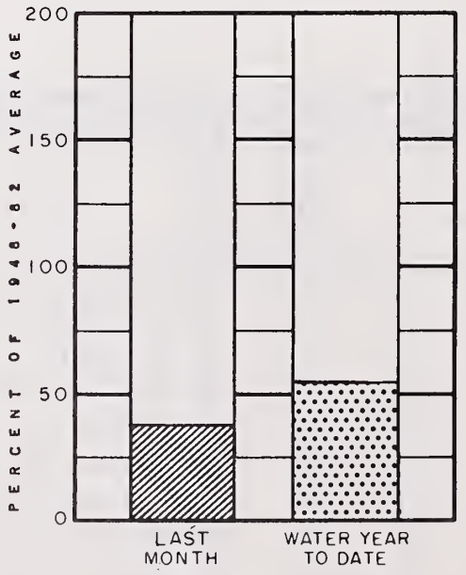
Deschutes at Moody



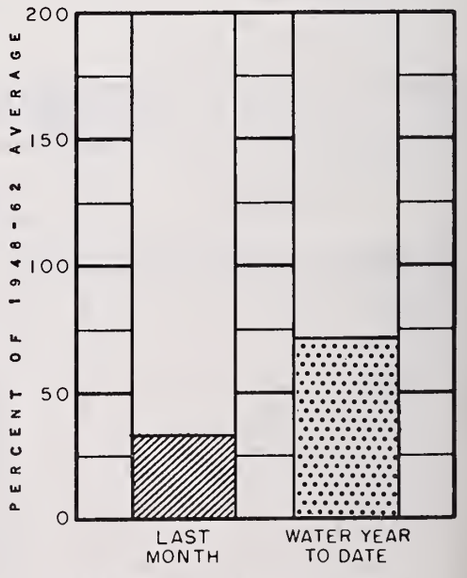
Mid. Fk. Willamette below No. Fk.



Umpqua near Elkton



Rogue at Raygold



Upper Klamath Lake net inflow

Data furnished by U.S. Geological Survey; The Pacific Power and Light Co.; and North and South Boards of Control Owyhee Project.

WATER SUPPLY OUTLOOK
OWYHEE, MALHEUR WATERSHEDS
OREGON

as of

MAY 1, 1968

U. S. D. A. SOIL CONSERVATION SERVICE
OREGON STATE UNIVERSITY ··· OREGON STATE ENGINEER

GENERAL OUTLOOK

Streamflow approaching new record-low amounts is forecast for Malheur County water users for the 1968 summer season and water supplies will barely be sufficient for lands served from Lake Owyhee reservoir. Other lands served from reservoirs will have only fair supplies. All lands dependent on diversions from natural streamflow will have extremely short water supplies similar to the dry season of 1934.

PRECIPITATION and SNOW COVER

Winter precipitation, November through March, was only two-thirds of the usual amount according to the U. S Weather Bureau. April precipitation followed the pattern and was only 62 percent average. Mountain snowpacks have literally vanished since the late February snow-melt and rainfall except at very high elevations.

RESERVOIR STORAGE

Water stored in Warmsprings and Agency Valley reservoirs on May first was 149,660 acre feet compared with 163,200 a.f. last year. Bully Creek reservoir held 23,000 acre feet compared with 27,300 a.f. last year. Flow of the Malheur near Drewsey is forecast at only 4,000 acre feet May through July and the North Fork at Beulah is estimated to produce only 7,000 acre feet. This supply will be insufficient for a complete season of irrigation.

Lake Owyhee held 432,790 acre feet on May first and 458,000 a.f. last year. Inflow to the lake May through July is forecast at only 25,000 acre feet. For the same period in 1934 the streamflow was 25,030 a.f. Total water available will provide sufficient amounts for this season only.

Antelope reservoir had 23,089 acre feet on hand on May 6th. Flow of Jordan Creek, May through July, is forecast at 8,000 acre feet. Total water will be a short supply for irrigation in the Jordan Valley.

All other streams have already completed their flow or will cease to flow very soon.

Report prepared by
W.T. FROST AND TOM GEORGE
U.S. DEPARTMENT OF AGRICULTURE - SOIL CONSERVATION SERVICE
1218 S.W. WASHINGTON ST.
PORTLAND, OREGON 97205

WATER SUPPLY OUTLOOK expressed as "Poor", "Fair" "Average" or "Excellent"

STREAM or AREA	FLOW PERIOD	
	SPRING SEASON	LATE SEASON
Boulder Creek	Spring peak flows are past.	Poor
Bully Creek		Poor
Cow Creek		Poor
Jordan Creek		Poor
Jordan Valley Irrig. Dist.		Poor
McDermitt Creek		Poor
Oregon Canyon Creek		Poor
Owyhee Project		Average
Succor Creek		Poor
Tenmile Creek		Poor
Vale-Oregon Irrig. Dist.		Fair
Warmsprings Irrig. Dist.		Fair
Willow Creek (Reservoired)		Fair

RESERVOIR STORAGE (1,000 Ac. Ft.) May 1, 1968

RESERVOIR	USABLE CAPACITY	MEASURED (First of Month)		
		THIS YEAR	LAST YEAR	1948-62 AVERAGE
Agency Valley	60.0	43.0	46.6	51.2
Antelope	55.0	23.1	41.6	28.5 [m]
Bully Creek	30.0	23.0	27.3	- -
Lake Owyhee	715.0	435.2	458.5	553.6
Warmsprings	191.0	106.7	116.6	128.6
Willow Creek #3	26.0		- -	- -

STREAMFLOW FORECASTS [a] (1,000 Ac. Ft.) as of May 1, 1968

FORECAST POINT NO.	FORECAST POINT NAME	FORECAST THIS YEAR	FORECAST PERIOD	1948-62 AVERAGE	THIS YEAR AS PERCENT OF AVERAGE [i]
1780	Jordan Creek above Lone Tree Creek	8.0	May-July	50	16
2140	Malheur near Drewsey	4.0	May-July	34	12
		5.0	May-Sept.	35	14
2175	Malheur, North Fork at Beulah [d]	7.0	May-July	33	21
		9.0	May-Sept.	38	24
1825	Owyhee Reservoir net Inflow [k]	25	May-July	168	15
		32	May-Sept.	186	17

SOIL MOISTURE

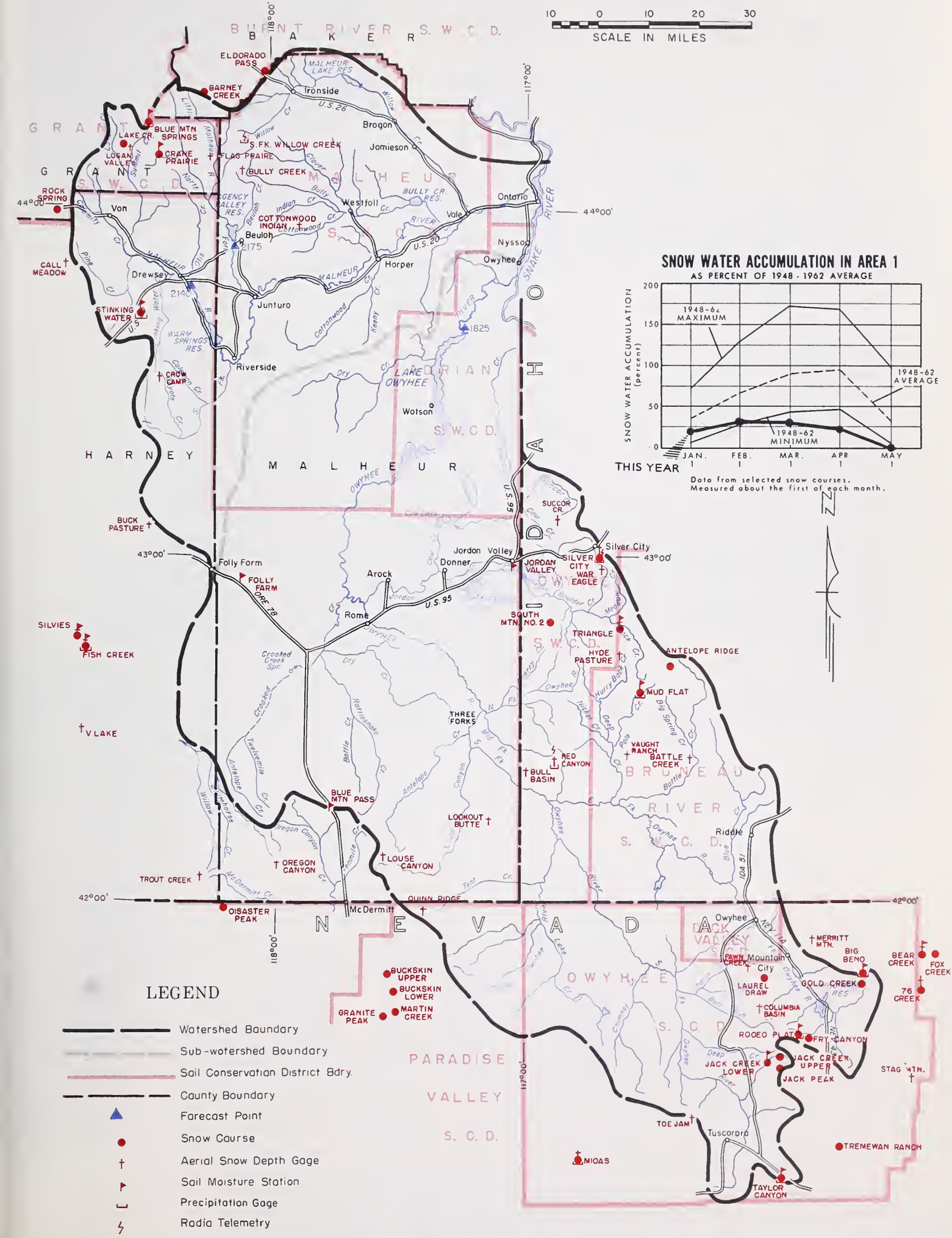
STATION NAME	ELEVATION	PROFILE (Inches) DEPTH	PROFILE (Inches) CAPACITY	SOIL MOISTURE (Inches) DATE	THIS YEAR	LAST YEAR	2 YEARS AGO
Bear Creek (Nev.)	7800	72	16.8	[b]			
Big Bend (Nev.)	6700	48	16.7	5/3	16.4	15.9	16.5
Blue Mtn. Springs	5900	42	16.9	5/1	12.9	12.1	12.8
Crane Prairie	5375	48	18.2	5/1	18.1	16.4	17.9
Folly Farm	4450	30	12.5	[b]			
Jack Cr., Lower (Nev.)	6800	48	8.6	4/30	8.3	8.3	8.1
Jordan Valley	4390	36	14.8	4/29	10.3	- -	- -
Mud Flat (Ida.)	5500	48	12.8	[b]			
Rodeo Flat (Nev.)	6800	42	11.0	5/3	10.9	9.2	11.0
Stinking Water Summit	4800	48	21.9	[b]			
Taylor Canyon (Nev.)	6200	48	15.1	4/30	14.6	13.2	14.9
Triangle (Ida.)	5150	48	16.6	[b]			

SNOW

SNOW COURSE NAME	ELEVATION	CURRENT INFORMATION DATE OF SURVEY	SNOW DEPTH (Inches)	WATER CONTENT (Inches)	PAST RECORD WATER CONTENT (Inches) LAST YEAR	1948-62 AVERAGE
Antelope Ridge (Ida.)	5900	[c]				
Barney Creek	5950	4/26	0	0.0	10.6	- -
Battle Creek (Ida.)	5700	[c]				
Bear Creek (Nev.)	7800	4/29	37	15.2	27.0	21.0 [h]
Big Bend (Nev.)	6700	5/2	0	0.0	T	1.3 [h]
Blue Mountain Springs	5900	5/1	0	0.0	17.5	7.8 [m]
Buck Pasture	5700	[c]				
Buckskin, Lower (Nev.)	6700	[c]				
Buckskin, Upper (Nev.)	7200	[c]				
Bull Basin (Ida.)	5600	[c]				
Bully Creek	5300	[c]				
Call Meadow	5340	[c]				

(a) Assuming normal meteorological conditions. (b) No report. (c) Not scheduled. (d) Corrected to natural flow. (e) Aerial snow depth gage, water content estimated. (f) Nearest current data. (g) Partly estimated. (h) 1948-62 adjusted average. (i) 1948-62, 15 year average. (j) Telephonic report - data not confirmed. (k) Data from PP&L Co. or USBR records. (l) Ground measurement. (m) Average for 5 or more years in base period.

OWYHEE, MALHEUR WATERSHEDS



SNOW WATER ACCUMULATION IN AREA 1

AS PERCENT OF 1948 - 1962 AVERAGE

Data from selected snow courses.
Measured about the first of each month.

SNOW

SNOW COURSE		CURRENT INFORMATION			PAST RECORD	
					WATER CONTENT (Inches)	
NAME	ELEVATION	DATE OF SURVEY	SNOW DEPTH (Inches)	WATER CONTENT (Inches)	LAST YEAR	1948-62 AVERAGE
Columbia Basin (Nev.)	6650	c				
Cottonwood-Indian	4320	c				
Crane Prairie	5375	c				
Crow Camp	5500	c				
Disaster Peak (Nev.)	6500	c				
Eldorado Pass	4600	4/30	0	0.0	0.0	- -
Fawn Creek (Nev.)	7000	c				
Fish Creek	7900	c				
Flag Prairie	4750	c				
Fox Creek (Nev.)	6800	c				
Fry Canyon (Nev.)	6700	5/2	0	0.0	6.0	1.1 h
Gold Creek (Nev.)	6600	5/2	0	0.0	0.0	0.0 h
Granite Peak (Nev.)	7800	c				
Hyde Pasture (Ida.)	5800	c				
Jack Creek, Lower (Nev.)	6800	4/30	0	0.0	T	0.0 h
Jack Creek, Upper (Nev.)	7250	4/30	0	0.0	11.6	3.5 h
Jacks Peak (Nev.)	8420	4/30	55	21.7	31.4	28.5 h
Lake Creek	5120	c				
Laurel Draw (Nev.)	6700	c				
Logan Valley	5100	c				
Lookout Butte	5650	c				
Louse Canyon	6440	c				
Martin Creek (Nev.)	6700	c				
Merritt Mountain (Nev.)	7000	c				
Midas (Nev.)	7200	c				
Mud Flat (Ida.)	5500	c				
Oregon Canyon	6950	c				
Quinn Ridge (Nev.)	6300	c				
Red Canyon (Ida.)	6500	c				
Rock Spring	5100	5/1	0	0.0	2.9	- -
Rodeo Flat (Nev.)	6800	5/2	0	0.0	4.6	1.4 h
76 Creek (Nev.)	7100	c				
Silver City (Ida.)	6400	4/28	T	T	17.9	6.1 h
Silvies	6900	c				
South Mountain #2 (Nev.)	6340	4/29	0	0.0	14.2	3.8 h
Stag Mountain (Nev.)	7800	c				
Stinking Water	4800	c				
Succor Creek (Ida.)	6100	c				
Taylor Canyon (Nev.)	6200	4/30	0	0.0	0.0	0.0 h
Toe Jam (Nev.)	7700	c				
Tremewan Ranch (Nev.)	5700	5/2	0	0.0	0.0	0.0 h
Triangle (Ida.)	5150	c				
Trout Creek	7800	c				
"V" Lake	6600	c				
Vaught Ranch (Ida.)	5950	c				
War Eagle (Ida.)	7700	c				

WATER SUPPLY OUTLOOK
BURNT, POWDER, PINE, GRANDE RONDE, IMNAHA WATERSHEDS
OREGON

as of
MAY 1, 1968

U. S. D. A. SOIL CONSERVATION SERVICE
OREGON STATE UNIVERSITY ··· OREGON STATE ENGINEER

GENERAL OUTLOOK

In Northeastern Oregon streamflow approaching record-low amounts is forecast for the Grande Ronde river at La Grande, Powder river and Burnt river. Contrasting with these very low flows are forecast amounts between 62 and 86 per cent of average for streams flowing out of the Wallowa Mountains. Lands served from Unity reservoir and Wallowa Lake will have sufficient water for this season. All other lands will experience extreme shortages except those lands served from Wallowa Mountain streams which will have fair water supplies.

PRECIPITATION and SNOW COVER

Winter precipitation, November through March, was four-fifths of the usual amount according to the U. S. Weather Bureau. April precipitation was even less and amounted to one-third of the average. Mountain snowpacks on the Grande Ronde watershed are only 30 percent of the May first average and only 47 percent on the Powder and Burnt watersheds. Snow in the Wallowas is close to the May first average.

RESERVOIR STORAGE

Wallowa Lake contained 30,316 acre feet on May first compared with 14,200 acre feet a year ago. Unity reservoir was full with 25,600 acre feet on hand.

STREAMFLOW

The following forecasts of streamflow assume near average conditions of temperature and precipitation during the runoff period:

Stream Station	Period	Acre Feet	Percent Average
Burnt R. near Hereford	May-June	2,000	12
Powder R. near Baker	May-July	15,000	34
Eagle Cr. abv. Skull Cr.	May-July	111,000	80
Grande Ronde - La Grande	May-July	26,000	22
Catherine Cr. nr. Union	May-Sept.	36,000	62
Bear Cr. near Wallowa	May-Sept.	40,000	66
Lostine R. near Lostine	Apr.-Sept.	109,000	83
Hurricane Cr. nr. Joseph	Apr.-Sept.	40,000	83
East Fork Wallowa	May-July	7,600	86
Imnaha at Imnaha	Apr.-Sept.	252,000	79

Report prepared by
W.T. FROST AND TOM GEORGE
U.S. DEPARTMENT OF AGRICULTURE - SOIL CONSERVATION SERVICE
1218 S.W. WASHINGTON ST.
PORTLAND, OREGON 97205

WATER SUPPLY OUTLOOK expressed as "Poor", "Foir" "Average" or "Excellent"

STREAM or AREA	FLOW PERIOD	
	SPRING SEASON	LATE SEASON
Alder Slope	Spring peak flows are past.	Fair
Baker Valley		Poor
Big Creek		Poor
Clover Cr. (nr. N. Powder)		Poor
Cove		Poor
Durkee		Poor
Eagle Valley		Fair
Elgin		Poor
Enterprise-Joseph		Average
Hereford-Bridgeport		Average
Imnaha River		Fair
La Grande-Island City		Poor
Lostine-Wallowa		Fair
No. Powder River-Wolf Cr.		Poor
Pine Valley		Fair
Powder River-Elk Creek		Poor
Summerville		Poor
Sumpter Valley		Poor
Union-Hot Lake		Poor
Unity		Poor

RESERVOIR STORAGE (1,000 Ac. Ft.) May 1, 1968

RESERVOIR	USABLE CAPACITY	MEASURED (First of Month)		
		THIS YEAR	LAST YEAR	1948-62 AVERAGE
Thief Valley	17.4		- -	- -
Unity	25.2	25.6	24.5	22.7
Wallowa Lake	37.5	30.3	14.2	21.0

STREAMFLOW FORECASTS[a] (1,000 Ac. Ft.) as of May 1, 1968

FORECAST POINT NO.	FORECAST POINT NAME	FORECAST THIS YEAR	FORECAST PERIOD	1948-62 AVERAGE	THIS YEAR AS PERCENT OF AVERAGE[i]
3305	Bear near Wallowa	40	May-Sept.	61	66
2730	Burnt near Hereford[d]	2.0	May-June	16.0	12
		2.5	May-Sept.	17.8	12
3200	Catherine near Union	36	May-Sept.	58	62
2882	Eagle Creek above Skull Creek	111	May-July	139	80
		125	May-Sept.	154	80
3190	Grande Ronde at La Grande	26	May-July	118	22
		29	May-Sept.	121	24
3295	Hurricane Creek near Joseph	40	April-Sept.	48	83
2920	Imnaha at Imnaha	252	April-Sept.	318	79
3300	Lostine near Lostine	109	April-Sept.	131	83
2755	Powder River near Baker	15	May-July	44	34
		16	May-Sept.	45	36
3250	Wallowa, East Fork near Joseph[d]	7.6	May-July	8.8	86
		10.0	May-Sept.	11.2	89

SOIL MOISTURE

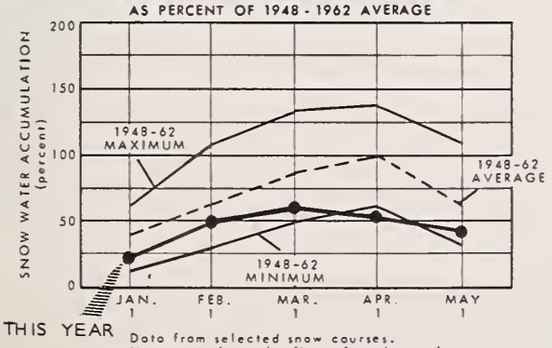
STATION NAME	STATION ELEVATION	PROFILE (Inches) DEPTH	PROFILE (Inches) CAPACITY	SOIL MOISTURE (Inches) DATE	THIS YEAR	LAST YEAR	2 YEARS AGO
Blue Mountain Summit	5100	36	16.8	4/29	13.0	13.2	12.6
Dooley Mountain	5430	36	9.2	4/24	7.1	6.0	6.4
Emigrant Springs	3925	48	22.3	4/30	20.6	20.4	19.5
Ladd Summit	3730	48	18.9	4/24	9.9	13.4	9.6
Moss Springs	5850	42	25.8	4/28	15.0	- -	- -
Tollgate	5070	48	23.6	4/29	18.7	18.8	19.2

(a) Assuming normal meteorological conditions. (b) No report. (c) Not scheduled. (d) Corrected to natural flow. (e) Aerial snow depth gage, water content estimated. (f) Nearest current data. (g) Partly estimated. (h) 1948-62 adjusted average. (i) 1948-62, 15 year average. (j) Telephonic report - data not confirmed. (k) Data from PP&L Co. or USBR records. (m) Average for 5 or more years in base period.

BURNT, POWDER, PINE, GRANDE RONDE, IMNAHA WATERSHEDS

SNOW WATER ACCUMULATION IN AREA 2

AS PERCENT OF 1948 - 1962 AVERAGE



Data from selected snow courses.
Measured about the first of each month.

LEGEND

- Watershed Boundary
- Sub-watershed Boundary
- Soil Conservation District Boundary
- County Boundary
- Forecast Point
- Snow Course
- Soil Moisture Station
- Aerial Snow Depth Gage
- Precipitation Gage

SNOW

SNOW COURSE		CURRENT INFORMATION			PAST RECORD	
					WATER CONTENT (Inches)	
NAME	ELEVATION	DATE OF SURVEY	SNOW DEPTH (Inches)	WATER CONTENT (Inches)	LAST YEAR	1948-62 AVERAGE
Aneroid Lake #1	7480	4/29	89	39.4	52.0	39.7 m
Aneroid Lake #2	7300	4/29	74	33.8	46.0	34.2 m
Anthony Lake	7125	4/30	54	22.2	36.2	29.2 m
Bald Mountain e (Ore.)	6700	4/28	36	15.8	33.2	- -
Barney Creek	5950	4/26	0	0.0	10.6	- -
Beaver Reservoir	5340	4/26	7	2.7	12.2	6.2 m
Big Sheep e	6200	4/28	67	30.2	37.2	- -
Blue Mountain Summit	5098	4/26	0	0.0	6.4	1.6 m
Bourne	5800	4/25	0	0.0	13.4	5.6 m
County Line	4800	5/1	0	0.0	2.2	- -
Dooley Mountain	5430	4/24	0	0.0	9.1	1.7 m
Eilertson Meadows	5400	4/24	0	0.0	14.0	3.9 m
Eldorado Pass	4600	4/30	0	0.0	0.0	- -
Gold Center	5340	4/25	0	0.0	12.7	2.5 m
Goodrich Lake	6775	b				
Intake House	4930	4/24	0	0.0	10.7	- -
Little Alps	6200	4/30	20	8.0	20.2	- -
Little Antone	5000	4/30	0	0.0	0.0	- -
Lucky Strike	5050	4/29	5	2.0	12.5	- -
Meacham	4300	4/30	0	0.0	4.0	1.9 m
Mirror Lake e	8200	4/28	181	88.7	- -	- -
Moss Springs	5850	4/28	39	17.4	29.0	21.7 m
Power Plant	3990	4/24	0	0.0	0.0	- -
Schneider Meadows	5400	4/26	41	24.2	31.7	- -
Schoolmarm	4775	5/1	0	0.0	0.7	- -
Standley	7400	4/28	69	30.4	42.4	- -
Taylor Green	5740	4/28	13	6.6	18.8	- -
Tipton	5100	4/26	0	0.0	6.3	1.7 m
Tollgate	5070	4/29	0	0.0	24.7	20.6 m
TV Ridge e	7000	4/28	43	20.2	32.4	- -

"The Conservation of Water begins with the Snow Survey"

WATER SUPPLY OUTLOOK

UMATILLA, WALLA WALLA, WILLOW, ROCK, LOWER JOHN DAY WATERSHEDS

OREGON

as of

MAY 1, 1968

U. S. D. A. SOIL CONSERVATION SERVICE
OREGON STATE UNIVERSITY ··· OREGON STATE ENGINEER

GENERAL OUTLOOK

Streamflow approaching record-low amounts is forecast for Umatilla, Morrow and Gilliam County water users for the 1968 summer season and water supplies will be extremely short. Available water in McKay and Cold Springs Reservoirs will be insufficient for a complete irrigation season.

PRECIPITATION and SNOW COVER

Winter precipitation, November through March, was three-fourths of the usual amount. April precipitation was also short with only 46 percent of the average according to the U. S. Weather Bureau. Mountain snowpacks have vanished except at the very highest elevations. The only snow course in this area with any measurable snow was Lucky Strike where 5 inches of snow contained 2.0 inches of water. Valley soils have dried out considerably because of rainfall shortage and cool winds.

RESERVOIR STORAGE

Cold Springs Reservoir held 44,600 acre feet on May first and McKay Reservoir held 36,370 acre feet the same day. A year ago McKay held 46,600 acre feet. McKay water levels are particularly poor this season.

STREAMFLOW

The following forecasts of streamflow assume near average conditions of temperature and precipitation during the runoff period:

Stream Station	Period	Acre Feet	Percent Average
Butter Creek	May-July	800	17
McKay Creek	May-Sept.	2,000	14
Umatilla at Pendleton	May-July	20,000	22
Walla Walla, North Fork	May-July	2,700	24
Walla Walla, South Fork	May-July	26,000	59

Report prepared by
W.T. FROST AND TOM GEORGE
U.S. DEPARTMENT OF AGRICULTURE - SOIL CONSERVATION SERVICE
1218 S.W. WASHINGTON ST.
PORTLAND, OREGON 97205

WATER SUPPLY OUTLOOK expressed as "Poor", "Fair" "Average" or "Excellent"

STREAM or AREA	FLOW PERIOD	
	SPRING SEASON	LATE SEASON
Walla Walla River, No. Fk.	Spring peak flows are past.	Poor
Walla Walla River, So. Fk.		Poor
Walla Walla River, Main		Poor
Walla Walla River, Little		Poor
Couse Creek		Poor
Dry Creek		Poor
Pine Creek		Poor
Umatilla River, Main		Poor
Wildhorse Creek		Poor
Umatilla R. (Cold Springs Reservoir)		Poor
Umatilla R. (McKay Res.)		Poor
McKay Creek		Poor
Birch Creek		Poor
Butter Creek		Poor
Willow Creek		Poor
Rhea Creek		Poor
Rock Creek (John Day tributary)		Poor

RESERVOIR STORAGE (1,000 Ac. Ft.) May 1, 1968

RESERVOIR	USABLE CAPACITY	MEASURED (First of Month)		
		THIS YEAR	LAST YEAR	1948-62 AVERAGE
Cold Springs	50.0	44.6	50.0	49.2
McKay	73.8	36.4	46.6	62.9

STREAMFLOW FORECASTS[a] (1,000 Ac. Ft.) as of May 1, 1968

FORECAST POINT		FORECAST THIS YEAR	FORECAST PERIOD	1948-62 AVERAGE	THIS YEAR AS PERCENT OF AVERAGE[i]
NO.	NAME				
0320	Butter Creek near Pine City	0.8	May-July	4.7	17
0225	McKay near Pilot Rock	2.0	May-Sept.	14.1	14
0200	Umatilla River near Gibbon	12.8	May-July	52	25
		18.6	May-Sept.	58	32
0210	Umatilla River at Pendleton	20	May-July	92	22
		24	May-Sept.	97	25
0110	Walla Walla, No. Fork near Milton	2.7	May-July	11.1	24
		3.0	May-Sept.	11.7	26
0100	Walla Walla, So. Fork near Milton	26	May-July	44	59
		36	May-Sept.	58	62

SOIL MOISTURE

STATION		PROFILE (Inches)		SOIL MOISTURE (Inches)			
NAME	ELEVATION	DEPTH	CAPACITY	DATE	THIS YEAR	LAST YEAR	2 YEARS AGO
Athena-Weston	1700	48	18.7	4/29	11.1	11.4	14.3
Battle Mtn. Summit	4340	48	13.8	4/29	12.4	13.8	12.5
Emigrant Springs	3925	48	22.3	4/30	20.6	20.4	19.5
Tollgate	5070	48	23.6	4/29	18.7	18.8	19.2

SNOW

SNOW COURSE		CURRENT INFORMATION			PAST RECORD	
NAME	ELEVATION	DATE OF SURVEY	SNOW DEPTH (Inches)	WATER CONTENT (Inches)	WATER CONTENT (Inches) LAST YEAR	WATER CONTENT (Inches) 1948-62 AVERAGE
Arbuckle Mountain	5400	4/23	0	0.0	6.2	2.7[h]
Battle Mountain Summit	4340	4/29	0	0.0	T	- -
Blue Mountain Camp	4300	4/29	0	0.0	3.6	- -
Emigrant Springs	3925	4/30	0	0.0	0.0	1.2[m]
Lucky Strike	5050	4/29	5	2.0	12.5	- -
Meacham	4300	4/30	0	0.0	4.0	1.9[m]
Tollgate	5070	4/29	0	0.0	24.7	20.6[h]
Walla Walla Diversion	2400	*b*				
Weston Mountain	2700	4/29	0	0.0	0.0	- -

(a) Assuming normal meteorological conditions. (b) No report. (c) Not scheduled. (d) Corrected to natural flow. (e) Aerial snow depth gage, water content estimated. (f) Nearest current data. (g) Partly estimated. (h) 1948-62 adjusted average. (i) 1948-62 15 year average. (j) Telephonic report - data not confirmed. (k) Data from PP&L Co. or USBR records. (m) Average for 5 or more years in base period.

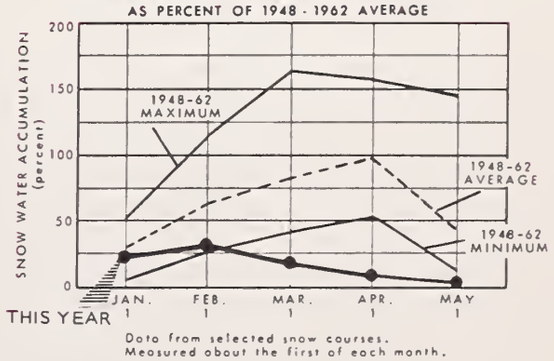
UMATILLA, WALLA WALLA, WILLOW, ROCK, LOWER JOHN DAY WATERSHEDS

LEGEND

- Watershed Boundary
- Sub-watershed Boundory
- Soil Conservation District Bdry.
- County Boundory
- Forecast Point
- Snow Course
- Soil Moisture Station
- Precipitation Gage

SNOW WATER ACCUMULATION IN AREA 3

AS PERCENT OF 1948 - 1962 AVERAGE



Data from selected snow courses.
Measured about the first of each month.

WATER SUPPLY OUTLOOK
UPPER JOHN DAY WATERSHEDS
OREGON

as of

MAY 1, 1968

U. S. D. A. SOIL CONSERVATION SERVICE
OREGON STATE UNIVERSITY ··· OREGON STATE ENGINEER

GENERAL OUTLOOK

Drastically low streamflows comparable to 1931 and 1934 will severely cripple livestock and other agricultural operations this summer in the John Day Basin. If unusually hot and dry weather conditions, similar to last summer, should recur the streams in the John Day Basin will establish new record lows.

PRECIPITATION

Winter precipitation, November through March, was 60 percent of average, according to the U. S. Weather Bureau. April precipitation over the basin was only 32 percent of average.

SNOW COVER

Mountain snowpacks have vanished except at the highest elevations. Snow was found only at the Olive Lake Snow Course on the John Day Watershed on May first.

STREAMFLOW

A consideration of all of the above factors results in streamflow forecasts with comparable low flows as follows:

	Apr.-July 1968 Acre Feet	% of Avg. 1948-62	Observed 1931	%	Observed 1934	%
John Day at Prairie City	16,000	35	17,600	38	14,200	31
John Day, Mid. Fk. at Ritter	41,000	32	64,100	50	25,900	20
Strawberry near Prairie City	4,300	53	3,950	49	4,000	49

The above forecasts assume average temperatures and precipitation from now until the end of the forecast period.

Report prepared by
W.T. FROST AND TOM GEORGE
U.S. DEPARTMENT OF AGRICULTURE - SOIL CONSERVATION SERVICE
1218 S.W. WASHINGTON ST.
PORTLAND, OREGON 97205

WATER SUPPLY OUTLOOK expressed as "Poor", "Fair" "Average" or "Excellent"

STREAM or AREA	FLOW PERIOD	
	SPRING SEASON	LATE SEASON
Beech Creek	Spring peak flows are past.	Poor
Beech Creek-Fox-Long Cr.		Poor
Bridge-Mountain Creeks		Poor
Camas Creek		Poor
Cherry Creek		Poor
Indian-Pine Creeks		Poor
John Day River, Main Fork		Poor
John Day River, Mid. Fork		Poor
John Day River, N. Fork		Poor
John Day River, S. Fork		Poor
Monument-Kimberly		Poor
Strawberry Creek		Poor

RESERVOIR STORAGE (1,000 Ac. Ft.) May 1, 1968

RESERVOIR	USABLE CAPACITY	MEASURED (First of Month)		
		THIS YEAR	LAST YEAR	1948-62 AVERAGE

STREAMFLOW FORECASTS[a] (1,000 Ac. Ft.) as of May 1, 1968

FORECAST POINT NO.	FORECAST POINT NAME	FORECAST THIS YEAR	FORECAST PERIOD	1948-62 AVERAGE	THIS YEAR AS PERCENT OF AVERAGE[i]
0385	John Day at Prairie City	16	April-July	46	35
		20	April-Sept.	51	39
0440	John Day, Middle Fork at Ritter	41	April-July	127	32
		45	April-Sept.	131	34
0375	Strawberry near Prairie City	4.3	April-July	8.1	53
		5.0	April-Sept.	8.8	57

SOIL MOISTURE

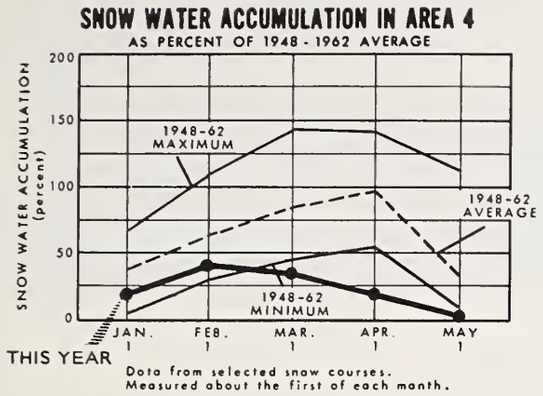
STATION NAME	STATION ELEVATION	PROFILE (Inches) DEPTH	PROFILE (Inches) CAPACITY	SOIL MOISTURE (Inches) DATE	THIS YEAR	LAST YEAR	2 YEARS AGO
Battle Mtn. Summit	4340	48	13.8	4/29	12.4	13.8	12.5
Beech Creek	4800	48	21.3	4/29	15.0	17.3	12.9
Blue Mountain Springs	5900	42	16.9	5/1	12.9	12.1	12.8
Blue Mountain Summit	5100	36	16.8	4/29	13.0	13.2	12.6
Derr	5670	24	9.0	*b*			
Marks Creek	4540	36	14.1	4/29	11.8	13.5	13.2
Snow Mountain	6300	48	16.7	*b*			
Starr Ridge	5150	36	10.6	5/1	10.5	10.5	10.4
Williams Ranch	4500	42	17.9	*b*			

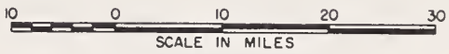
SNOW

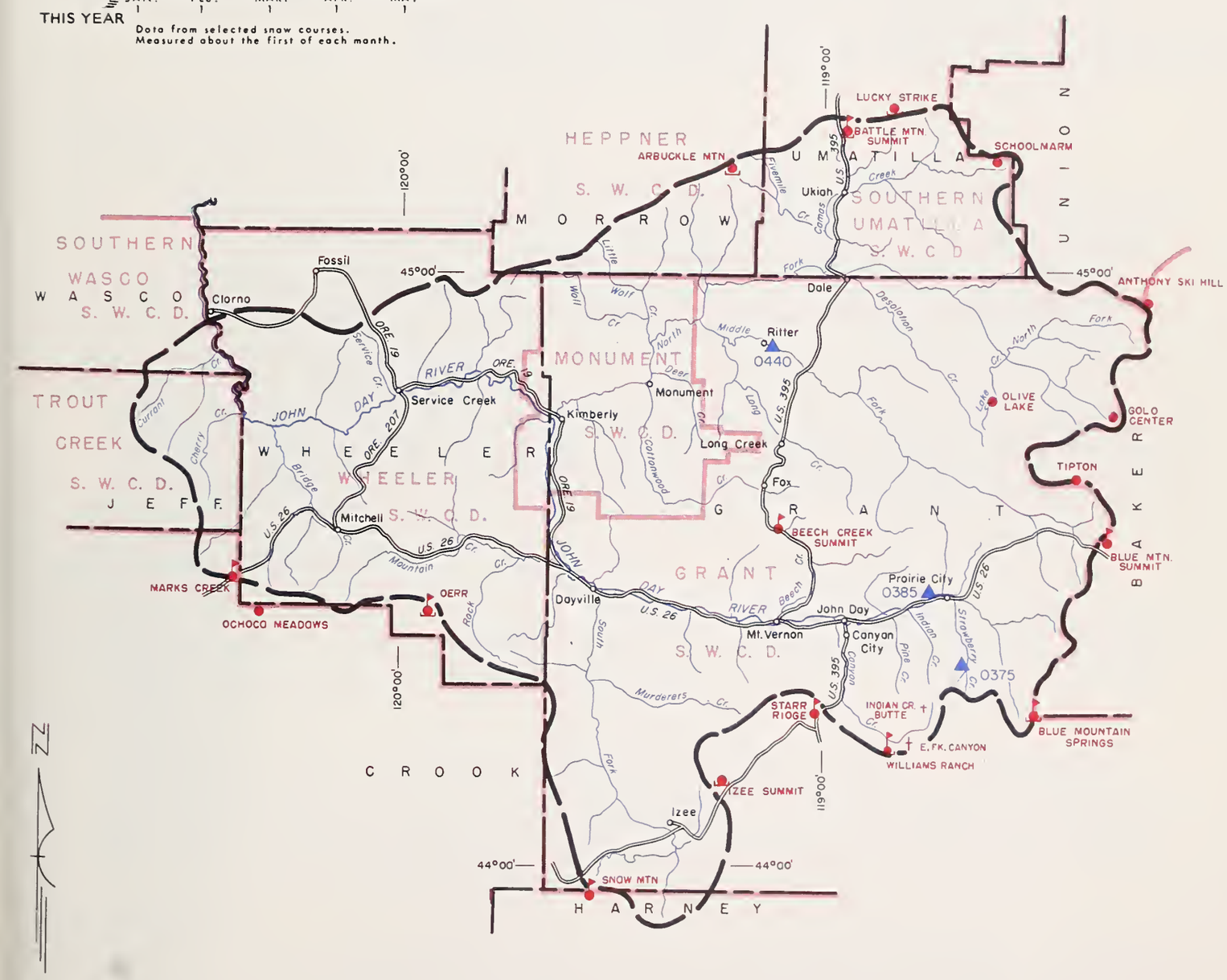
SNOW COURSE NAME	SNOW COURSE ELEVATION	CURRENT INFORMATION DATE OF SURVEY	SNOW DEPTH (Inches)	WATER CONTENT (Inches)	PAST RECORD WATER CONTENT (Inches) LAST YEAR	1948-62 AVERAGE
Anthony Lake	7125	4/30	54	22.2	36.2	29.2[m]
Arbuckle Mountain	5400	4/23	0	0.0	6.2	2.7[h]
Battle Mtn. Summit	4340	4/29	0	0.0	T	- - -
Beech Creek Summit	4800	5/1	0	0.0	- -	0.6[m]
Blue Mountain Springs	5900	5/1	0	0.0	17.5	7.8[m]
Blue Mountain Summit	5098	4/26	0	0.0	6.4	1.6[m]
Derr	5670	*c*				
East Fork Canyon	5700	*c*				
Gold Center	5340	4/25	0	0.0	12.7	2.5[m]
Indian Creek Butte	6550	*c*				
Izee Summit	5293	5/1	0	0.0	7.1	1.6[m]
Lucky Strike	5050	4/29	5	2.0	12.5	- -
Marks Creek	4540	4/29	0	0.0	0.4	T[m]
Ochoco Meadows	5200	*c*				
Olive Lake	6000	4/29	34	12.0	21.9	16.9[h]
Schoolmarm	4775	5/1	0	0.0	0.7	- -
Snow Mountain	6300	*c*				
Starr Ridge	5150	5/1	0	0.0	2.5	0.4[h]
Tipton	5100	4/26	0	0.0	6.3	1.7[m]
Williams Ranch	4500	*c*				

(a) Assuming normal meteorological conditions. (b) No report. (c) Not scheduled. (d) Corrected to natural flow. (e) Aerial snow depth gage, water content estimated. (f) Nearest current data. (g) Partly estimated. (h) 1948-62 adjusted average. (i) 1948-62, 15 year average. (j) Telephonic report - data not confirmed. (k) Data from PP&L Co. or USBR records. (m) Average for 5 or more years in base period.

UPPER JOHN DAY WATERSHEDS







LEGEND

- Watershed Boundary
- Sub-watershed Boundary
- Soil Conservation District Bdry.
- County Boundary
- ▲ Forecast Point
- ● Snow Course
- ⚑ Soil Moisture Station
- † Aeriol Snow Depth Gage
- ⌴ Precipitation Gage

"The Conservation of Water begins with the Snow Survey"

WATER SUPPLY OUTLOOK
UPPER DESCHUTES, CROOKED WATERSHEDS
OREGON

as of

MAY 1, 1968

U. S. D. A. SOIL CONSERVATION SERVICE
OREGON STATE UNIVERSITY ·:· OREGON STATE ENGINEER

GENERAL OUTLOOK

Streamflow approaching record-low amounts is forecast for Deschutes and Crook County water users for 1968 summer season and water supplies will be extremely short. Reservoired water supplies will provide only fair amounts of water for the Arnold, Central Oregon and Lone Pine Irrigation Districts and the Tumalo Project. The Swalley Canal will have adequate water by direct diversion. The Ochoco Irrigation District will receive a limited water supply.

PRECIPITATION and SNOW COVER

Winter precipitation, November through March, was less than two-thirds of the average and April was still poorer with about one-fifth average according to the U. S. Weather Bureau. Mountain snowpacks have vanished in the Crooked River watersheds but are about 43 percent average for May first on the Deschutes.

RESERVOIR STORAGE

Ochoco Reservoir held only 17,980 acre feet on May first which is insufficient for the Ochoco Irrigation District. However, some Ochoco lands will receive water from Prineville Reservoir which contained about 119,638 acre feet compared with 146,900 acre feet a year ago.

About May first Crescent Lake held 48,140 acre feet, Crane Prairie held 32,500 acre feet and Wickiup contained 169,280 acre feet. Irrigated lands served from these reservoirs are also dependent upon natural flow of the Deschutes which is forecast at less than half of its usual flow for the summer. The Central Oregon Irrigation District has first right on the natural flow of the Deschutes after Swalley Canal.

STREAMFLOW

The flow of the Deschutes at Benham Falls, May through September, is forecast at 260,000 acre feet or 48 percent of average. This flow will be nearly identical with the 1931 flow of 260,300 acre feet and less than the 1941 flow of 271,500 acre feet. Other streams are forecast very close to the lowest flows of record.

Report prepared by
W.T. FROST AND TOM GEORGE
U.S. DEPARTMENT OF AGRICULTURE - SOIL CONSERVATION SERVICE
1218 S.W. WASHINGTON ST.
PORTLAND, OREGON 97205

WATER SUPPLY OUTLOOK expressed as "Poor", "Fair" "Average" or "Excellent"

STREAM or AREA	FLOW PERIOD	
	SPRING SEASON	LATE SEASON
Arnold Irrigation District	Spring peak flows are past.	Fair
Bear Creek		Poor
Beaver Creek		Poor
Camp Creek		Poor
Central Ore. Irrig. Dist.		Fair
Crooked River		Poor
Deschutes River		Poor
Hay-Trout Creeks		Poor
Lone Pine Irrig. Dist.		Fair
Mill Creek		Poor
North Unit Irrig. Dist.		Poor
Ochoco Creek		Poor
Sisters Irrigation Dist.		Poor
Snow Creek Irrig. Dist.		Fair
Squaw Creek Irrig. Dist.		Fair
Swalley Ditch		Average
Tumalo Project		Fair
Walker Basin Irrig. Dist.		Poor

RESERVOIR STORAGE (1,000 Ac. Ft.) May 1, 1968

RESERVOIR	USABLE CAPACITY	MEASURED (First of Month)		
		THIS YEAR	LAST YEAR	1948-62 AVERAGE
Crane Prairie	55.3	32.5	35.9	46.6
Crescent Lake	86.9	48.1	55.5	45.9
Ochoco	47.5	18.0	33.2	39.1
Prineville	153.0	119.6	146.9	- -
Wickiup	200.0	169.3	186.9	185.5

STREAMFLOW FORECASTS[a] (1,000 Ac. Ft.) as of May 1, 1968

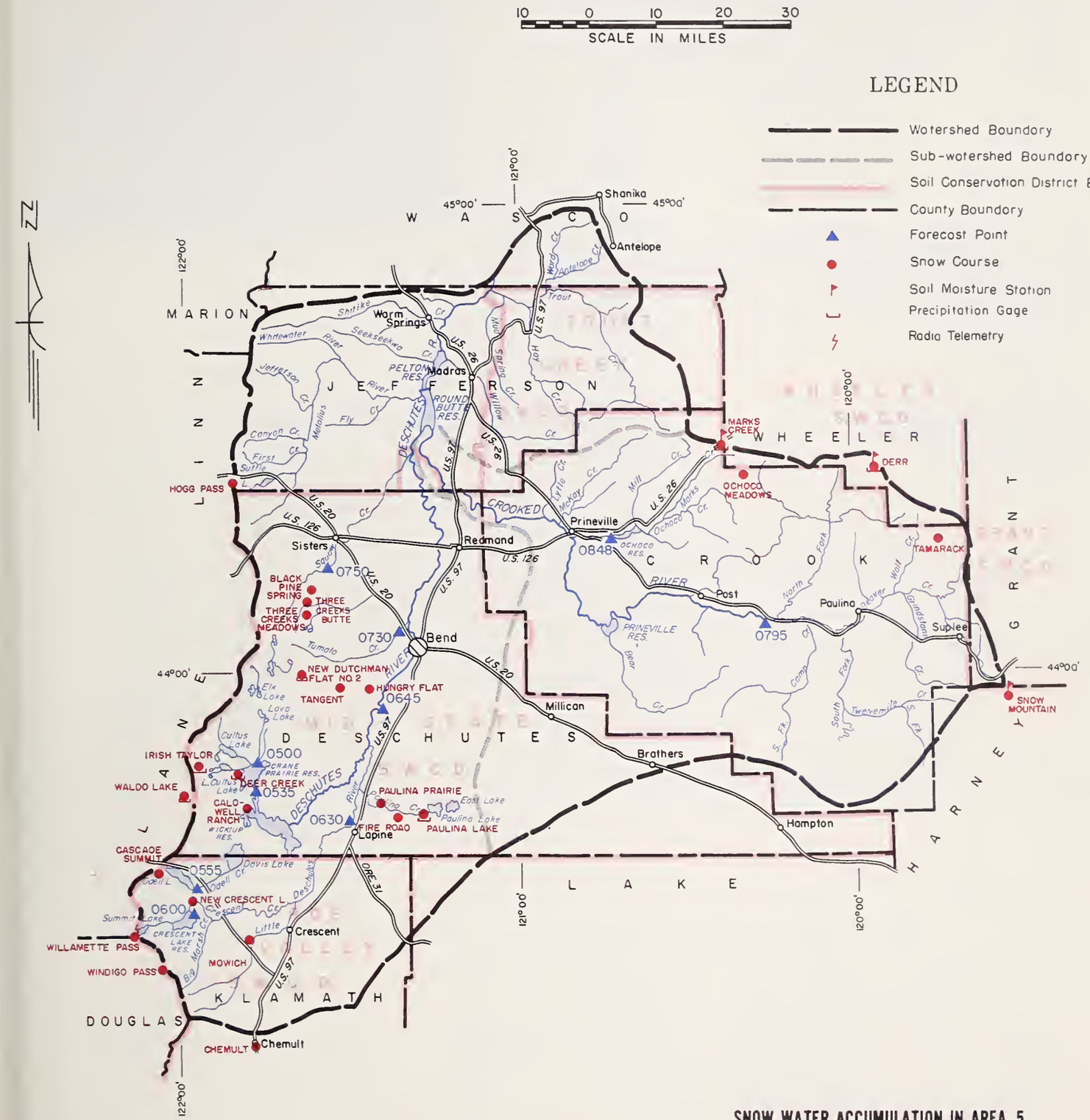
FORECAST POINT NO.	FORECAST POINT NAME	FORECAST THIS YEAR	FORECAST PERIOD	1948-62 AVERAGE	THIS YEAR AS PERCENT OF AVERAGE[i]
0535	Crane Prairie Reservoir total Inflow	46	May-July	79	58
		74	May-Sept.	127	58
0600	Crescent at Crescent Lake[d]	5.6	May-July	22	25
		7.1	May-Sept.	29	24
0795	Crooked near Post	4.7	May-July	46	10
		5.0	May-Sept.	48	10
0645	Deschutes at Benham Falls[d]	149	May-July	328	45
		260	May-Sept.	541	48
0500	Deschutes below Snow Creek	28	May-Sept.	68	41
0630	Deschutes, Little near Lapine[d]	28	April-July	99	28
		31	April-Sept.	113	27
0848	Ochoco Reservoir net Inflow	0.5	May-Sept.	16.5	3
0555	Odell near Crescent	19	April-Sept.	34	56
0750	Squaw near Sisters	38	April-Sept.	56	68
0730	Tumalo near Bend	38	April-Sept.	54	70

SOIL MOISTURE

STATION NAME	STATION ELEVATION	PROFILE (Inches) DEPTH	PROFILE (Inches) CAPACITY	SOIL MOISTURE (Inches) DATE	THIS YEAR	LAST YEAR	2 YEARS AGO
Derr	5670	24	9.0				
Marks Creek	4540	36	14.1	4/29	11.8	13.5	13.2
Snow Mountain	6300	48	16.7				

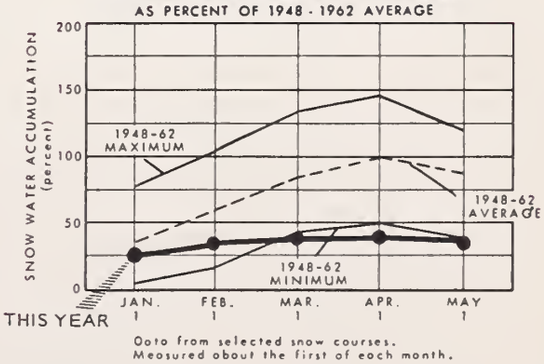
(a) Assuming normal meteorological conditions. (b) No report. (c) Not scheduled. (d) Corrected to natural flow. (e) Aerial snow depth gage, water content estimated. (f) Nearest current data. (g) Partly estimated. (h) 1948-62 adjusted average. (i) 1948-62, 15 year average. (j) Telephonic report - data not confirmed. (k) Data from PP&L Co. or USBR records. (m) Average for 5 or more years in base period.

UPPER DESCHUTES, CROOKED WATERSHEDS



SNOW WATER ACCUMULATION IN AREA 5

AS PERCENT OF 1948 - 1962 AVERAGE



Data from selected snow courses.
Measured about the first of each month.

SNOW

SNOW COURSE NAME	ELEVATION	CURRENT INFORMATION: DATE OF SURVEY	CURRENT INFORMATION: SNOW DEPTH (Inches)	CURRENT INFORMATION: WATER CONTENT (Inches)	PAST RECORD: WATER CONTENT (Inches) LAST YEAR	PAST RECORD: WATER CONTENT (Inches) 1948-62 AVERAGE
Black Pine Spring	4600	4/26	0	0.0	0.0	0.4 h
Caldwell Ranch	4400	c				
Cascade Summit	4880	5/1	18	7.7	31.6	28.6
Chemult	4760	4/29	0	0.0	6.6	0.6 m
Deer Creek	4554	c				
Derr	5670	c				
Fire Road	5050	4/26	0	0.0	7.4	0.7 h
Hogg Pass	4755	5/1	44	20.2	44.1	46.9 h
Hungry Flat	4400	4/29	0	0.0	0.0	0.0 m
Irish Taylor	5500	c				
Marks Creek	4540	4/29	0	0.0	0.4	T m
Mowich	4700	4/25	0	0.0	0.0	0.0 h
New Crescent Lake	4800	4/25	0	0.0	13.1	5.6 h
New Dutchman Flat #2	6400	4/29	54	27.7	58.2	57.7
Ochoco Meadows	5200	c				
Paulina Lake	6330	4/26	12	5.4	23.6	18.1 h
Paulina Prairie	4285	4/26	0	0.0	0.0	0.0 h
Snow Mountain	6300	c				
Tamarack	4800	c				
Tangent	5400	4/29	T	T	23.0	12.5 h
Three Creeks Butte	5200	4/26	0	0.0	6.3	3.1 h
Three Creeks Meadows	5650	4/26	2	1.0	20.1	15.3 h
Waldo Lake	5500	4/29	37	15.5	36.7	- -
Willamette Pass	5600	4/25	58	26.3	50.2	45.4 h
Windigo Pass	5800	4/25	47	21.6	45.8	48.8 h

"The Conservation of Water begins with the Snow Survey"

WATER SUPPLY OUTLOOK
HOOD, MILE CREEKS, LOWER DESCHUTES WATERSHEDS
OREGON

as of
MAY 1, 1968

U. S. D. A. SOIL CONSERVATION SERVICE
OREGON STATE UNIVERSITY ··· OREGON STATE ENGINEER

GENERAL OUTLOOK

Streamflow approaching record-low amounts is forecast for Hood River and Wasco County water users for the 1968 summer season and water supplies will be extremely short.

PRECIPITATION and SNOW COVER

Winter precipitation, November through March, was less than two-thirds of the average and April continued the pattern with only one-third of the normal amount according to the U. S. Weather Bureau.

Mountain snowpacks have dwindled to 40 percent of the May first amount. Only at very high elevations has snow remained near normal.

RESERVOIR STORAGE

Water held in small reservoirs is at very low levels for this time of the year. Soil moisture is excellent at mountain levels but is rapidly being lost in valley areas.

STREAMFLOW

The following forecasts of streamflow, May through September, assume near average conditions of temperature and precipitation during runoff:

Stream Station	1968 Forecast	% of Avg.	Lowest Flow	Percent	Year
White R. blw. Tygh V.	30,000 a.f.	24	39,600 a.f.	31	1941
West Fork Hood River	65,000 a.f.	52	57,800 a.f.	46	1934
Hood R. nr. Hood R.	140,000 a.f.	50	15,700 a.f.	6	1926
			(25,100 a.f.	9	1941)

Flows of Mill Creek, the Mile Creeks and other small streams will be very negligible this season.

Report prepared by
W.T. FROST AND TOM GEORGE
U.S. DEPARTMENT OF AGRICULTURE - SOIL CONSERVATION SERVICE
1218 S.W. WASHINGTON ST.
PORTLAND, OREGON 97205

WATER SUPPLY OUTLOOK expressed as "Poor", "Fair" "Average" or "Excellent"

STREAM or AREA	FLOW PERIOD	
	SPRING SEASON	LATE SEASON
Aldridge Ditch (Tony Creek)	Spring peak flows are past.	Poor
Badger Creek		Poor
Dee Irrigation District		Poor
East Fork Irrig. Dist.		Poor
Farmers Irrigation Dist.		Poor
Hood River Irrig. Dist.		Poor
Juniper Flat		Poor
Middle Fork Irrig. Dist.		Poor
Mile Creeks		Poor
Mill Creek		Poor
Mount Hood Irrig. Dist.		Poor
Rock-Gate-Threemile Crs.		Poor
Tygh Creek		Poor
White River		Poor

RESERVOIR STORAGE (1,000 Ac. Ft.) May 1, 1968

RESERVOIR	USABLE CAPACITY	MEASURED (First of Month)		
		THIS YEAR	LAST YEAR	1948-62 AVERAGE
Clear Lake	11.9	3.8	2.9	- -

STREAMFLOW FORECASTS[a] (1,000 Ac. Ft.) as of May 1, 1968

FORECAST POINT		FORECAST THIS YEAR	FORECAST PERIOD	1948-62 AVERAGE	THIS YEAR AS PERCENT OF AVERAGE[i]
NO.	NAME				
1210	Hood near Hood River[d]	100	May-July	218	46
		140	May-Sept.	278	50
1185	Hood, West Fork near Dee	50	May-July	101	50
		65	May-Sept.	125	52
1015	White below Tygh Valley	26	May-July	108	24
		30	May-Sept.	126	24

SNOW

SNOW COURSE		CURRENT INFORMATION			PAST RECORD	
NAME	ELEVATION	DATE OF SURVEY	SNOW DEPTH (Inches)	WATER CONTENT (Inches)	WATER CONTENT (Inches) LAST YEAR	WATER CONTENT (Inches) 1948-62 AVERAGE
Brooks Meadows	4300					
Clear Lake	3500	4/29	0	0.0	5.2	7.2[h]
Clear Lake (Experimental)	3500	4/29	0	0.0	12.8	- -
Cooper Spur	3490	5/1	0	0.0	- -	- -
Greenpoint Reservoir	3400	c				
Knebal Springs	3850	c				
Lambert Point	7000	c				
Parkdale	1770	c				
Phlox Point	5400	4/29	73	31.6	69.1	71.1
Red Hill	4400	c				
Still Creek	3670	4/29	8	3.0	20.5	20.7
Switchback	3255	c				
Tilly Jane	6000	c				
Ulrich Ranch Junction	3350	c				
Umbrella Falls	5400	4/28	92	40.5	67.9	- -
Upper Valley	2530	c				

(a) Assuming normal meteorological conditions. (b) No report. (c) Not scheduled. (d) Corrected to natural flow. (e) Aerial snow depth gage, water content estimated. (f) Nearest current data. (g) Partly estimated. (h) 1948-62 adjusted average. (i) 1948-62, 15 year average. (j) Telephonic report - data not confirmed. (k) Data from PP&L Co. or USBR records. (m) Average for 5 or more years in base period.

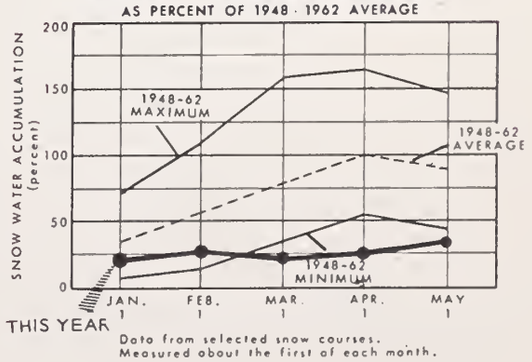
HOOD, MILE CREEKS, LOWER DESCHUTES WATERSHEDS

LEGEND

- Watershed Boundary
- Sub-watershed Boundary
- Soil Conservation District Bdry.
- County Boundary
- Forecast Point
- Snow Course
- Aerial Snow Depth Gage
- Soil Moisture Station
- Precipitation Gage
- Temperature Gage
- Radio Telemetry

SNOW WATER ACCUMULATION IN AREA 6

AS PERCENT OF 1948 - 1962 AVERAGE



Data from selected snow courses.
Measured about the first of each month.

"The Conservation of Water begins with the Snow Survey"

WATER SUPPLY OUTLOOK
LOWER COLUMBIA WATERSHEDS
OREGON

as of

MAY 1, 1968

U. S. D. A. SOIL CONSERVATION SERVICE
OREGON STATE UNIVERSITY ··· OREGON STATE ENGINEER

GENERAL OUTLOOK

Except for average to near average streamflow from British Columbia and the upper Snake in Idaho and Wyoming, the Columbia Basin outlook for the May-September 1968 period is for below to much below average streamflow. Extremely poor flows are in prospect in Oregon and on southern tributaries in the Snake in Idaho. Reservoir storage will offset shortages in many areas.

SNOW COVER

Due to cool weather and average to above average snowfall at the higher mountain elevations during April, the May 1 mountain snowpack in Canada, Montana, northern Washington and east and southeastern Idaho remains in the 80 to 120 percent of average range. Except for the Wallowa Mountains, Oregon has an extremely deficient May 1 snowpack ranging from 0 to 49 percent. Essentially, the snow cover on the lower Columbia in Washington and Oregon and the lower Snake in Idaho and Oregon is 50 percent of the May 1 average or less.

SOIL MOISTURE

Soil moisture conditions in the basin are fair to good. Soils are drying out rapidly at the middle and lower elevations particularly in the snow and streamflow deficient lower basin areas in Oregon, Washington and Idaho due to lack of precipitation.

STREAMFLOW

Flow of the Columbia River at The Dalles, Oregon, as reported by the U. S. Geological Survey, was slightly below average during the fall. In February and March the flow was moderately above average, reflecting unseasonable mid-winter snowmelt and rain. April was well below normal reflecting cool weather in the upper basin and below normal local inflow into the lower basin. The record by months for the 1968 water year to date was as follows:

Month	Percent of Average Discharge (1948-62)
October	96 (Adjusted for storage)
November	99 " " "
December	88 " " "
January	96 " " "
February	129 " " "
March	118 " " "
April	58 " " "

The May-September forecast of the Columbia River at The Dalles is 80,600,000 acre feet or 85 percent of average.

W.T. FROST AND TOM GEORGE
U.S. DEPARTMENT OF AGRICULTURE - SOIL CONSERVATION SERVICE
1218 S.W. WASHINGTON ST.
PORTLAND, OREGON 97205

STREAMFLOW FORECASTS[a] (1,000 Ac. Ft.) as of May 1, 1968

FORECAST POINT NO.	FORECAST POINT NAME	FORECAST THIS YEAR	FORECAST PERIOD	1948-62 AVERAGE	THIS YEAR AS PERCENT OF AVERAGE[i]
1057	Columbia at The Dalles	50,800	May–June	60,426	84
		80,600	May–Sept.	94,841	85

HISTORICAL DATA (Columbia River at The Dalles)

YEAR	STREAMFLOW[d] (1,000 A.F.) APR.— SEPT.	APR.— JUNE	MAY—JUNE	PEAK (1,000 c.f.s)	DATE
1943	115,000	75,300	52,400	541	June 21
1944	61,900	39,200	32,100	326	June 19
1945	81,600	54,600	47,300	505	June 8
1946	108,100	75,400	59,600	581	May 30
1947	100,300	70,000	56,800	536	May 11
1948	130,500	94,600	81,900	999	May 31
1949	95,700	71,400	56,000	622	May 18
1950	120,400	74,700	61,200	744	June 25
1951	113,000	75,600	59,100	597	May 26
1952	107,700	77,500	57,300	557	May 28
1953	100,600	64,900	55,800	609	June 17
1954	119,500	70,500	59,300	561	May 23
1955	99,500	58,300	50,300	545	June 26
1956	131,400	96,900	75,800	815	June 3
1957	105,700	80,500	67,200	700	May 22
1958	97,700	72,000	58,600	593	May 31
1959	112,500	71,900	58,900	555	June 23
1960	97,000	64,000	48,000	442	June 6
1961	101,400	74,400	64,000	699	June 8
1962	94,600	64,100	49,200	460	June 5
1948–62 Avg.	108,500	74,100	60,200	633	
1963	87,000	56,300	46,200	437	June 18
1964	109,020	70,739	61,313	662	June 18

LOWER COLUMBIA RIVER FLOOD STAGES (with 9.5' tide at Astoria)

VANCOUVER GAGE (Weather Bu.)	FLOW AT THE DALLES (1,000 c.f.s)	DRAINAGE DISTRICT PUMPHOUSE SANDY	SAUVIE ISL.	SCAPPOOSE	DEER ISL.	RAINIER	BEAVER	WOODSON
		RIVER MILES 118.9	96.0	91.0	77.0	62.0	52.0	47.0
35 (1894)	1210	41.2	34.2	33.3	28.5	21.9	17.5	15.5
34	1160	40.5	33.5	32.5	27.7	21.2	17.0	15.0
33	1100	39.6	32.4	31.4	26.7	20.2	16.1	14.3
32	1050	38.9	31.5	30.5	25.7	19.5	15.4	13.7
31 (1948)	1000	38.0	30.7	29.5	25.1	18.8	14.7	13.0
30	943	36.6	29.5	28.5	24.3	18.1	14.0	12.4
29	897	35.5	28.5	27.7	23.7	17.5	13.4	11.8
28	853	34.3	27.5	26.7	22.8	17.0	13.0	11.4
27 (1956)	811	33.0	26.5	25.6	21.8	16.2	12.5	11.0
26 (1950)	771	32.1	25.5	24.6	20.9	15.5	12.2	10.7
25	733	30.7	24.2	23.2	19.7	14.6	11.7	10.3
24	697	29.7	23.0	22.2	19.0	14.1	11.4	10.2
23	662	29.0	22.3	21.4	18.4	13.6	11.2	10.0
22	628	28.1	21.4	20.3	17.2	13.0	10.9	9.7
21	595	27.2	20.7	19.5	16.4	12.6	10.6	9.6
20 (1954)	564	26.2	19.8	18.6	15.5	12.1	10.2	9.4
19	534	25.5	19.2	18.0	15.0	11.8	10.0	9.3
18	501	24.4	18.3	17.2	14.3	11.4	9.8	9.1
17	479	23.4	17.4	16.4	13.7	11.0	9.6	8.9
16	452	22.4	16.5	15.5	13.0	10.5	9.3	8.7

(a) Assuming normal meteorological conditions. (b) No report. (c) Not scheduled. (d) Corrected to natural flow. (e) Aerial snow depth gage, water content estimated. (f) Nearest current data. (g) Partly estimated. (h) 1948-62 adjusted average. (i) 1948-62, 15 year average. (j) Telephonic report - data not confirmed. (k) Data from PP&L Co. or USBR records.

LOWER COLUMBIA WATERSHEDS

WATERSHED LOCATION

LEGEND

- Watershed Boundary
- Sub-watershed Boundary
- Soil Conservation District Bdry.
- County Boundary
- (50) River Miles
- Snow Course
- Temperature
- Radio Telemetry

Lower Columbia Watersheds

"The Conservation of Water begins with the Snow Survey"

WATER SUPPLY OUTLOOK
WILLAMETTE WATERSHEDS
OREGON

as of

MAY 1, 1968

U. S. D. A. SOIL CONSERVATION SERVICE
OREGON STATE UNIVERSITY ··· OREGON STATE ENGINEER

GENERAL OUTLOOK

Streamflow approaching record-low amounts is forecast for Willamette Valley water users for the 1968 summer season and water supplies will be seriously short except where stored or ground water supplies are available.

PRECIPITATION and SNOW COVER

Winter precipitation, November through March, was only three-fourths average and April continued the pattern with only six-tenths of the usual amount according to the U. S. Weather Bureau. Mountain snowpacks at the high elevations dwindled instead of increasing normally and are now 40 percent of the May first average.

RESERVOIR STORAGE

Water levels in the multiple-purpose reservoirs of the Willamette Basin are remarkably close to usual storage levels considering the shortage of precipitation and the subnormal streamflows to date. Many of these reservoirs have blocks of stored water which can be made available for irrigation purposes.

STREAMFLOW

The following April-September forecasts are based on streamflow corrected for upstream storage and assume near average conditions of temperature and precipitation during the runoff season:

Stream Station	1968 Forecast	% Avg.	Lowest Flow	Percent	Year
Clackamas at Estacada	480,000 a.f.	54	380,000 a.f.	43	1926
North Santiam - Mehama	500,000 a.f.	50	509,000 a.f.	51	1926
McKenzie at McKenzie Bridge	380,000 a.f.	58	406,000 a.f.	62	1926
Mid. Fork Willamette below North Fork	460,000 a.f.	48	381,000 a.f.	39	1926
Willamette at Salem	2,900,000 a.f.	52	2,253,000 a.f.	40	1926

Report prepared by
W.T. FROST AND TOM GEORGE
U.S. DEPARTMENT OF AGRICULTURE - SOIL CONSERVATION SERVICE
1218 S.W. WASHINGTON ST.
PORTLAND, OREGON 97205

WATER SUPPLY OUTLOOK expressed as "Poor", "Fair" "Averoge" or "Excellent"

STREAM or AREA	FLOW PERIOD	
	SPRING SEASON	LATE SEASON
Calapooya	Spring peak flows are past.	Poor
Clackamas		Poor
McKenzie		Poor
Molalla		Poor
Santiam, North		Poor
Santiam, South		Poor
Willamette, Coast Fork		Poor
Willamette, Middle Fork		Poor

RESERVOIR STORAGE (1,000 Ac. Ft.) May 1, 1968

RESERVOIR	USABLE CAPACITY	MEASURED (First of Month)		
		THIS YEAR	LAST YEAR	1948-62 AVERAGE
Cottage Grove	30.0*	19.8	25.1	25.4
Cougar	155.2*	112.1	74.0	- -
Detroit	299.9*	242.0	181.0	228.9[m]
Dorena	70.5*	53.5	54.9	53.6[m]
Fall Creek	115.0*	86.6	99.0	- -
Fern Ridge	94.2*	91.1	94.9	86.2
Foster	30.0*	0	- -	- -
Green Peter	270.0*	219.6	- -	- -
Hills Creek	200.0*	147.8	116.5	- -
Lookout Point	337.2*	207.5	195.8	271.2[m]
Timothy Lake	61.7	60.2	55.1	54.4[m]

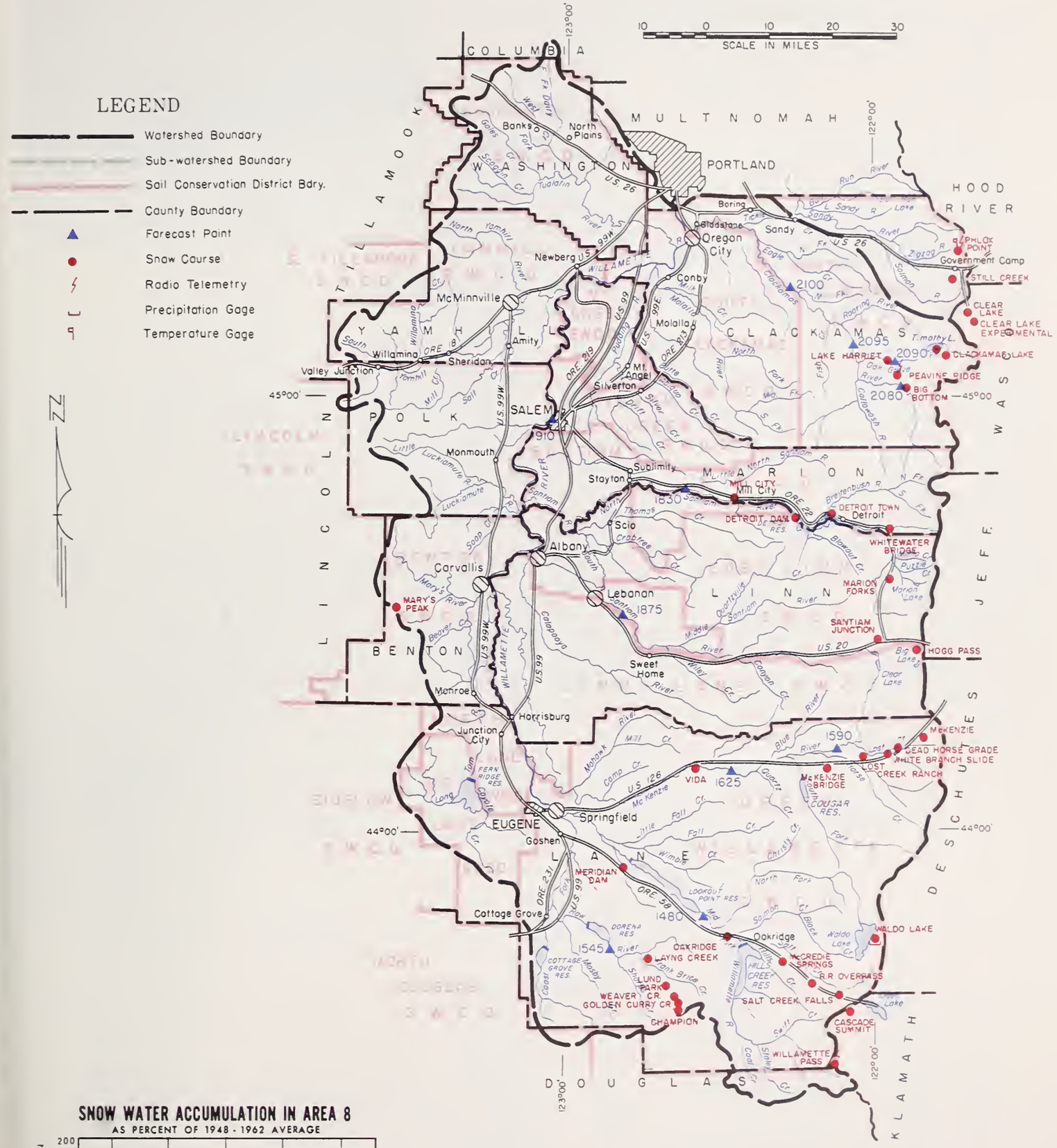
*Multiple purpose reservoir--space reserved primarily for flood control.

STREAMFLOW FORECASTS[a] (1,000 Ac. Ft.) as of May 1, 1968

FORECAST POINT		FORECAST THIS YEAR	FORECAST PERIOD	1948-62 AVERAGE	THIS YEAR AS PERCENT OF AVERAGE[i]
NO.	NAME				
2080	Clackamas at Big Bottom	80	April-July	150	53
		100	April-Sept.	184	54
2100	Clackamas at Estacada	400	April-July	770	52
		480	April-Sept.	890	54
2095	Clackamas above Three Lynx	315	April-July	584	54
		380	April-Sept.	683	56
1590	McKenzie at McKenzie Bridge	275	April-July	502	55
		380	April-Sept.	658	58
1625	McKenzie near Vida	685	April-July	1144	60
		850	April-Sept.	1392	61
2090	Oak Grove Fork above Power Intake	90	April-July	147	61
		120	April-Sept.	190	63
1545	Row near Dorena	46	April-July	108	42
		50	April-Sept.	112	45
1830	Santiam, North at Mehama[d]	450	April-July	884	51
		500	April-Sept.	991	50
1875	Santiam, South at Waterloo	300	April-July	637	47
		320	April-Sept.	675	47
1480	Willamette, Mid. Fk. blw. N. Fk. nr. Oakridge[d]	400	April-July	863	46
		460	April-Sept.	968	48
1910	Willamette at Salem[d]	2400	April-July	5040	48
		2900	April-Sept.	5566	52

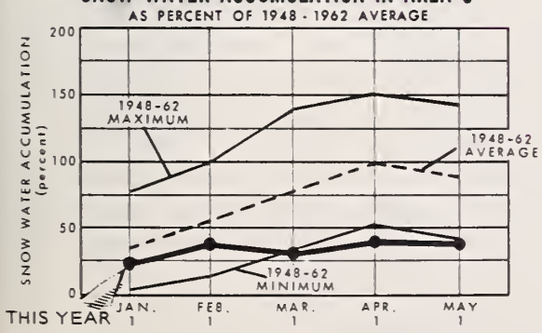
(a) Assuming normal meteorological conditions. (b) No report. (c) Not scheduled. (d) Corrected to natural flow. (e) Aerial snow depth gage, water content estimated. (f) Nearest current data. (g) Partly estimated. (h) 1948-62 adjusted average. (i) 1948-62, 15 year average. (j) Telephonic report - data not confirmed. (k) Data from PP&L Co. or USBR records. (m) Average for 5 or more years in base period.

WILLAMETTE WATERSHEDS



SNOW WATER ACCUMULATION IN AREA 8

AS PERCENT OF 1948 - 1962 AVERAGE



Data from selected snow courses.
Measured about the first of each month

SNOW

SNOW COURSE		CURRENT INFORMATION			PAST RECORD	
					WATER CONTENT (Inches)	
NAME	ELEVATION	DATE OF SURVEY	SNOW DEPTH (Inches)	WATER CONTENT (Inches)	LAST YEAR	1948-62 AVERAGE
Big Bottom	2118	b				
Cascade Summit	4880	5/1	18	7.7	31.6	28.6
Champion	4500	4/30	4	1.2	39.1	- -
Clackamas Lake	3400	c				
Clear Lake	3500	4/29	0	0.0	5.2	7.2 h
Clear Lake (Experimental)	3500	4/29	0	0.0	12.8	- -
Dead Horse Grade	3800	4/30	0	0.0	24.3	13.4 h
Detroit Town	1610	5/1	0	0.0	0.0	0.0 h
Detroit Dam	1580	5/1	0	0.0	0.0	0.0 h
Golden Curry Creek	3136	4/30	0	0.0	2.1	- -
Hogg Pass	4755	5/1	44	20.2	44.1	46.9 h
Lake Harriet	2045	b				
Layng Creek	1200	4/30	0	0.0	0.0	- -
Lost Creek Ranch	1956	4/30	0	0.0	0.0	0.0 h
Lund Park	1740	4/30	0	0.0	0.0	- -
Marion Forks	2730	5/1	0	0.0	7.4	3.9 h
Marys Peak	3620	4/28	1	0.5	- -	10.7*
McCredie Springs	2120	5/1	0	0.0	0.0	0.0 h
McKenzie	4800	4/30	41	20.0	47.3	51.6 h
McKenzie Bridge	1372	4/30	0	0.0	0.0	0.0 m
Meridian Dam	750	5/1	0	0.0	0.0	0.0 h
Mill City	826	5/1	0	0.0	0.0	0.0 m
Oakridge	1310	5/1	0	0.0	0.0	0.0 h
Peavine Ridge	3500	b				
Phlox Point	5400	4/29	73	31.6	69.1	71.1
Railroad Overpass	2750	5/1	0	0.0	0.0	0.1 h
Salt Creek Falls	4000	5/1	0	0.0	21.2	11.4 h
Santiam Junction	3990	5/1	0	0.0	20.7	15.0 h
Still Creek	3670	4/29	8	3.0	20.5	20.7
Timothy Lake	3295	b				
Vida	800	4/30	0	0.0	0.0	0.0 h
Waldo Lake	5500	4/29	37	15.5	36.7	- -
Weaver Creek	2440	4/30	0	0.0	0.0	- -
White Branch Slide	2800	4/30	0	0.0	0.0	2.1 h
Whitewater Bridge	2175	5/1	0	0.0	0.0	T h
Willamette Pass	5600	4/25	58	26.3	50.2	45.4 h

*Years of record.

"The Conservation of Water begins with the Snow Survey"

WATER SUPPLY OUTLOOK
ROGUE, UMPQUA, WATERSHEDS
OREGON

as of

MAY 1, 1968

U. S. D. A. SOIL CONSERVATION SERVICE
OREGON STATE UNIVERSITY ··· OREGON STATE ENGINEER

GENERAL OUTLOOK

Most orchardists, farmers and other water users in the Rogue and Umpqua Basins can expect extremely low water supplies this summer. A fair supply is indicated for the Talent Irrigation District with the cooperation of the water users to save all the water that can be saved. Poor supplies are in prospect for Medford and Rogue River Valley Irrigation Districts.

SNOW COVER and PRECIPITATION

The snow cover has almost vanished except at the highest elevations on the Cascade Crest and the Siskiyou's where the pack is at best only 60 per cent of average. Low and median elevation snow is entirely gone.

According to the U. S. Weather Bureau winter precipitation, November through March, was three-fourths of average. This dry trend continued on into the spring with only 42 percent of average precipitation in April.

RESERVOIR STORAGE

The combined storage in Emigrant, Howard Prairie and Hyatt Prairie Reservoirs is 85,000 acre feet compared to last years 96,100 a.f. Little inflow is expected from now until September into these reservoirs or into Fish Lake and Fourmile. The combined storage in these two reservoirs is 9,670 acre feet.

STREAMFLOW

Forecasted streamflow for the Rogue and Umpqua Basins with comparable low flow years are as follows:

Stream Station	Apr.-Sept. 1968 Forecast	% of Avg. 1948-62	Observed 1931	%	Observed 1940	%
Applegate nr. Copper	80,000	56	--	--	103,270	72
Illinois near Kerby	105,000	50	78,510	37	127,790	60
Little Butte, N. Fk. at Fish Lk.	7,000	44	5,600	35	9,600	60
Hyatt Res. net Inflow (May-Sept.)	800	30	0	0	800	30
Fourmile Lk. net Inflow	2,800	52	--	--	3,600	67
Rogue at Raygold (May-Sept.)	385,000	53	259,000	35	372,000	51
North Umpqua below Lemolo Res. nr. Toketee Falls	120,000	64	108,000	58	126,000	68

The Grants Pass Irrigation District will probably have to go on canal alternation about July 10th. The above forecasts assume average temperature and precipitation from now until the end of the forecast period.

Report prepared by
W.T. FROST AND TOM GEORGE
U.S. DEPARTMENT OF AGRICULTURE - SOIL CONSERVATION SERVICE
1218 S.W. WASHINGTON ST.
PORTLAND, OREGON 97205

WATER SUPPLY OUTLOOK expressed as "Poor", "Fair" "Average" or "Excellent"

STREAM or AREA	FLOW PERIOD	
	SPRING SEASON	LATE SEASON
Althouse Creek	Spring peak flows are past.	Poor
Applegate River, Big		Fair
Applegate River, Little		Fair
Ashland Creek		Fair
Butte Creek, Big		Poor
Butte Creek, Little		Poor
Cow Creek		Poor
Deer Creek		Poor
Elk Creek		Poor
Emigrant Creek (abv. Res.)		Poor
Evans Creek		Poor
Gold Hill Irrig. Dist.		Fair
Grants Pass Irrig. Dist.		Fair
Grave Creek		Poor
Illinois River, East Fork		Fair
Illinois River, West Fork		Fair
Jump-off-Joe Creek		Poor
Neil Creek		Fair
Red Blanket Creek		Poor
Rogue River		Fair
Sucker Creek		Poor
Table Rock Irrig. Dist.		Fair
Thompson Creek		Poor
Wagner Creek		Fair
Williams Creek		Poor

RESERVOIR STORAGE (1,000 Ac. Ft.) May 1, 1968

RESERVOIR	USABLE CAPACITY	MEASURED (First of Month)		
		THIS YEAR	LAST YEAR	1948-62 AVERAGE
Emigrant Gap	39.0	31.9	38.8	36.7*
Fish Lake	7.8	4.0	- -	6.2
Fourmile Lake	16.1	5.7	- -	10.7
Howard Prairie	60.0	41.5	43.4	- -
Hyatt Prairie	16.1	11.6	13.9	12.3

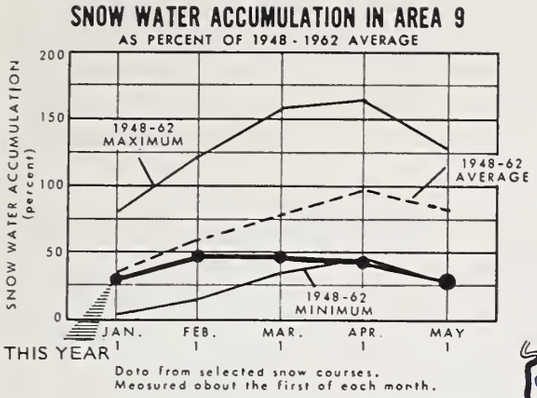
*Average for years of record after reconstruction.

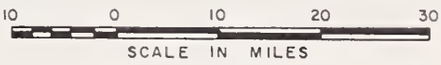
STREAMFLOW FORECASTS[a] (1,000 Ac. Ft.) as of May 1, 1968

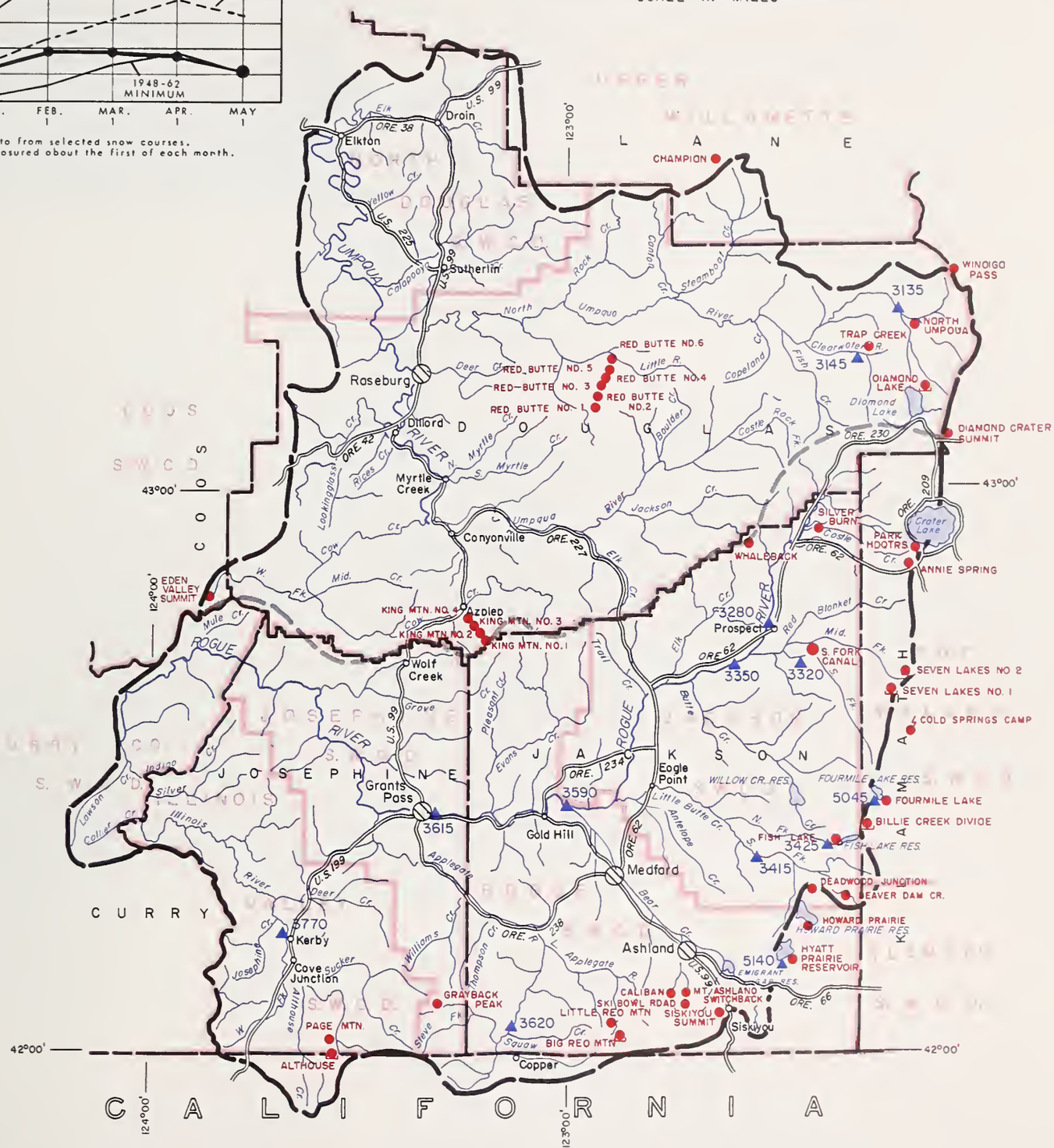
FORECAST POINT		FORECAST THIS YEAR	FORECAST PERIOD	1948-62 AVERAGE	THIS YEAR AS PERCENT OF AVERAGE[i]
NO.	NAME				
3620	Applegate near Copper	80	April-Sept.	142	56
3145	Clearwater above Trap Creek[d]	40	May-Sept.	62	64
5045	Fourmile Lake net Inflow[d]	2.8	April-Sept.	5.4	52
5140	Hyatt Reservoir net Inflow[d]	0.8	May-Sept.	2.7	30
3771	Illinois River near Kerby	100	April-July	206	49
		105	April-Sept.	212	50
3425	Little Butte, N. Fk. at Fish Lake nr. Lake Cr.[d]	7.0	April-Sept.	16.0	44
3415	Little Butte, S. Fk. near Lake Creek	6.0	April-July	38	16
	Note: Minimum flow will drop to 100 c.f.s. by -- .				
3280	Rogue above Prospect	110	May-July	212	52
		140	May-Sept.	272	51
3320	Rogue, South Fork near Prospect[d]	25	May-July	52	48
		30	May-Sept.	64	47
3350	Rogue River below South Fork	214	May-July	443	48
		314	May-Sept.	586	54
3590	Rogue at Raygold near Central Point	285	May-July	567	50
		385	May-Sept.	730	53
3615	Rogue at Grants Pass	350	May-Sept.	700	50
3135	Umpqua, No. blw. Lemolo Res. nr. Toketee Falls[d]	120	April-Sept.	186	64

(a) Assuming normal meteorological conditions. (b) No report. (c) Not scheduled. (d) Corrected to natural flow. (e) Aerial snow depth gage, water content estimated. (f) Nearest current data. (g) Partly estimated. (h) 1948-62 adjusted average. (i) 1948-62, 15 year average. (j) Telephonic report - data not confirmed. (k) Data from PP&L Co. or USBR records. (m) Average for 5 or more years in base period.

ROGUE, UMPQUA WATERSHEDS







LEGEND

- Watershed Boundary
- Sub-watershed Boundary
- Soil Conservation District Bdry
- County Boundary
- Forecast Point
- Snow Course
- Precipitation Gage
- Radio Telemetry

SNOW

SNOW COURSE		CURRENT INFORMATION			PAST RECORD	
					WATER CONTENT (Inches)	
NAME	ELEVATION	DATE OF SURVEY	SNOW DEPTH (Inches)	WATER CONTENT (Inches)	LAST YEAR	1948-62 AVERAGE
Althouse	4530	c				
Annie Spring	6018	4/29	58	25.7	56.0	45.4
Beaver Dam Creek	5100	5/1	0	0.0	17.7	- -
Big Red Mountain	6500	c				
Billie Creek Divide	5300	4/29	0	0.0	24.4	16.8 h
Caliban	6500	4/29	62	29.7	- -	- -
Champion	4500	4/30	4	1.2	39.1	- -
Cold Springs Camp	6100	4/27	31	14.1	39.7	- -
Deadwood Junction	4600	5/1	0	0.0	9.0	- -
Diamond-Crater Summit	5800	4/24	38	16.9	39.2	- -
Diamond Lake	5315	4/24	18	8.3	23.3	18.0
Fish Lake	4865	b				
Fourmile Lake	6000	b				
Grayback Peak	6000	c				
Howard Prairie	4500	5/1	0	0.0	8.8	- -
Hyatt Prairie Reservoir	4900	5/1	0	0.0	8.3	- -
King Mountain #1	4500	4/24	0	0.0	- -	- -
King Mountain #2	4000	4/24	0	0.0	- -	- -
King Mountain #3	3648	4/24	0	0.0	- -	- -
King Mountain #4	3049	4/24	0	0.0	- -	- -
King Mountain #5	2380	4/24	0	0.0	- -	- -
King Mountain #6	1820	4/24	0	0.0	- -	- -
Little Red Mountain	6500	c				
Mt. Ashland Switchback	6400	4/29	62	31.0	- -	- -
North Umpqua	4215	4/29	0	0.0	13.6	5.3 m
Page Mountain	4045	c				
Park Headquarters	6450	4/29	81	39.3	67.7	60.8
Red Butte #1	4560	4/24	0	0.0	25.4	- -
Red Butte #2	4000	4/24	0	0.0	9.5	- -
Red Butte #3	3500	4/24	0	0.0	T	- -
Red Butte #4	3000	4/24	0	0.0	0.0	- -
Red Butte #5	2500	4/24	0	0.0	0.0	- -
Red Butte #6	2000	4/24	0	0.0	0.0	- -
Seven Lakes #1	6800	c				
Seven Lakes #2	6200	c				
Silver Burn	3720	4/29	0	0.0	12.1	2.9 h
Siskiyou Summit	4630	c				
Ski Bowl Road	6000	4/29	30	14.7	- -	- -
South Fork Canal	3500	4/29	0	0.0	0.0	0.0 m
Trap Creek	3800	4/29	0	0.0	14.3	5.9 h
Whaleback	5140	c				
Windigo Pass	5800	4/25	47	21.6	45.8	48.8 h

"The Conservation of Water begins with the Snow Survey"

WATER SUPPLY OUTLOOK
KLAMATH WATERSHEDS
OREGON

as of

MAY 1, 1968

U. S. D. A. SOIL CONSERVATION SERVICE
OREGON STATE UNIVERSITY ··· OREGON STATE ENGINEER

GENERAL OUTLOOK

Farmers, ranchers and other water users in Klamath County without access to reservoired water will experience extremely limited water supplies this summer. Those in the Klamath Project with rights to water in Upper Klamath Lake, Clear Lake and Gerber will have an average supply.

SNOW COVER and PRECIPITATION

The snow cover has almost vanished except at the higher elevations where the pack is, at best, only 60 percent of average. Low and median elevation snow is entirely gone.

According to the U. S. Weather Bureau winter precipitation, November through March, was 67 percent of average. This dry trend continued on into the spring with only 21 percent of average precipitation in April.

RESERVOIR STORAGE

Upper Klamath Lake currently contains 440,300 acre feet compared to last year's 543,900 acre feet. Gerber Reservoir is holding 56,700 acre feet, slightly less than average and Clear Lake contains 207,900 acre feet compared to an average of 256,100 acre feet.

STREAMFLOW

Forecasted streamflows with comparable low flow years are as follows:

	May-Sept. 1968 Forecast	% of Avg. 1948-62	Observed 1934	%	Observed 1966	%
Clear Lake Reservoir-Inflow	3,500	20	4,030	23	6,660	38
Gerber Reservoir Inflow	1,000	16	1,730	28	1,320	21
Upper Klamath Lake Inflow	235,000	54	142,000	32	246,000	56
Sprague near Chiloquin	90,000	47	48,420	25	94,470	50
Williamson blw. Sprague R.	191,000	57	143,360	43	205,050	61

These forecasts assume average temperature and precipitation will occur from now until the end of the forecast period.

Report prepared by
W.T. FROST AND TOM GEORGE
U.S. DEPARTMENT OF AGRICULTURE - SOIL CONSERVATION SERVICE
1218 S.W. WASHINGTON ST.
PORTLAND, OREGON 97205

WATER SUPPLY OUTLOOK expressed as "Poor", "Fair" "Average" or "Excellent"

STREAM or AREA	FLOW PERIOD	
	SPRING SEASON	LATE SEASON
Ft. Klamath Valley	Spring peak flows are past.	Poor
Lost River (Clear Lake)		Average
Lost River (Gerber)		Average
Lost River (Willow Res.)		Fair
Sprague River		Poor
Upper Klamath Lake		Average
Williamson River		Poor

RESERVOIR STORAGE (1,000 Ac. Ft.) May 1, 1968

RESERVOIR	USABLE CAPACITY	MEASURED (First of Month)		
		THIS YEAR	LAST YEAR	1948-62 AVERAGE
Clear Lake	440.2	207.9	239.1	256.1
Gerber	94.0	56.7	73.3	60.0
Upper Klamath Lake	584.0	440.3	543.9	518.2

STREAMFLOW FORECASTS[a] (1,000 Ac. Ft.) as of May 1, 1968

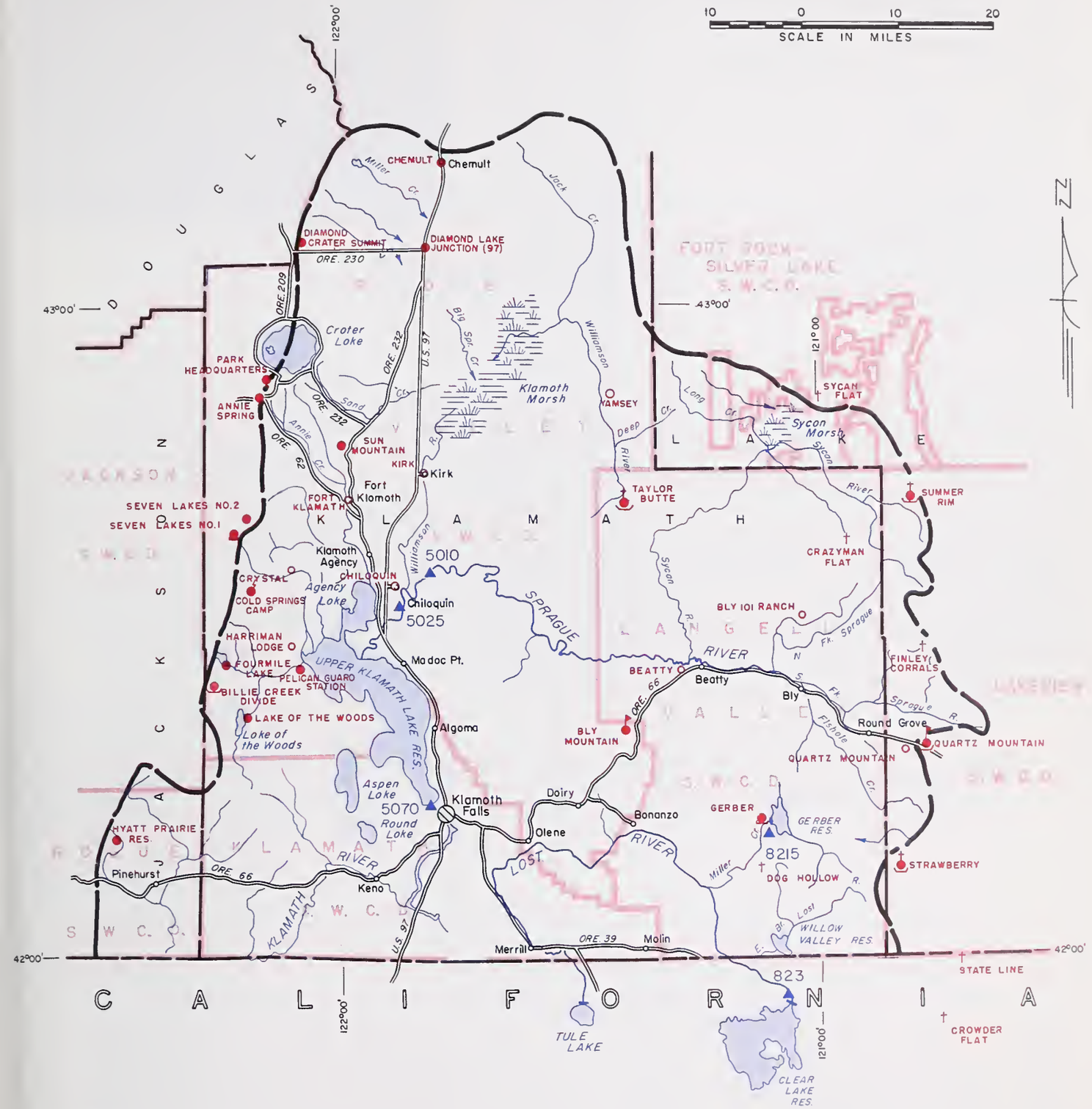
FORECAST POINT		FORECAST THIS YEAR	FORECAST PERIOD	1948-62 AVERAGE	THIS YEAR AS PERCENT OF AVERAGE[i]
NO.	NAME				
823	Clear Lake Reservoir Inflow [k]	3.5	May-Sept.	17.4	20
8215	Gerber Reservoir Inflow [k]	1.0	May-Sept.	6.2	16
5010	Sprague near Chiloquin	90	May-Sept.	190	47
5070	Upper Klamath Lake net Inflow [k]	235	May-Sept.	438	54
5025	Williamson below Sprague River	191	May-Sept.	336	57

SOIL MOISTURE

STATION		PROFILE (Inches)		SOIL MOISTURE (Inches)			
NAME	ELEVATION	DEPTH	CAPACITY	DATE	THIS YEAR	LAST YEAR	2 YEARS AGO
Bly Mountain	5090	42	14.0	4/22	11.4	12.4	12.3

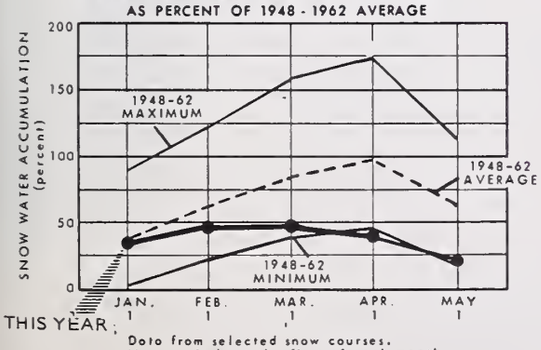
(a) Assuming normal meteorological conditions. (b) No report. (c) Not scheduled. (d) Corrected to natural flow. (e) Aerial snow depth gage, water content estimated. (f) Nearest current data. (g) Partly estimated. (h) 1948-62 adjusted average. (i) 1948-62, 15 year average. (j) Telephonic report - data not confirmed. (k) Data from PP&L Co. or USBR records. (m) Average for 5 or more years in base period.

KLAMATH WATERSHEDS



SNOW WATER ACCUMULATION IN AREA 10

AS PERCENT OF 1948 - 1962 AVERAGE



Data from selected snow courses.
Measured about the first of each month.

LEGEND

- Watershed Boundary
- Sub-watershed Boundary
- Soil Conservation District Bdry
- County Boundary
- Forecast Point
- Snow Course
- Aerial Snow Depth Gage
- COPCO Snow Station
- Soil Moisture Station
- Precipitation Gage
- Radio Telemetry

OR-10c

SNOW

SNOW COURSE NAME	ELEVATION	CURRENT INFORMATION: DATE OF SURVEY	CURRENT INFORMATION: SNOW DEPTH (Inches)	CURRENT INFORMATION: WATER CONTENT (Inches)	PAST RECORD: WATER CONTENT (Inches) LAST YEAR	PAST RECORD: WATER CONTENT (Inches) 1948-62 AVERAGE
Annie Spring	6018	4/29	58	25.7	56.0	45.4
Beatty (PP&L)	4300	c				
Billie Creek Divide	5300	4/29	0	0.0	24.4	16.8 h
Bly Mountain	5090	4/22	0	0.0	7.7	0.0 m
Bly 101 Ranch (PP&L)	4800	c				
Chemult	4760	4/29	0	0.0	6.6	0.6 m
Chiloquin (PP&L)	4187	c				
Cold Springs Camp	6100	4/26	31	14.1	39.7	- -
Crazyman Flat	6100	4/25	0	0.0	18.4	- -
Crowder Flat (Calif.)	5200	c				
Crystal (PP&L)	4200	c				
Diamond-Crater Summit	5800	4/24	38	16.9	39.2	- -
Diamond Lake Junction (97)	4600	4/24	0	0.0	0.0	- -
Dog Hollow	4900					
Finley Corrals	6000	4/25	0	0.0	17.0	- -
Fort Klamath (PP&L)	4150	c				
Fourmile Lake	6000	b				
Gerber	4850	c				
Harriman (PP&L)	4200	c				
Hyatt Prairie Reservoir	4900	5/1	0	0.0	8.3	- -
Kirk (PP&L)	4533					
Lake of the Woods	4960	5/1	0	0.0	11.2	6.3 h
Park Headquarters	6450	4/29	81	39.3	67.7	60.8
Pelican Guard Station	4150	4/29	0	0.0	0.0	- -
Quartz Mountain	5320	4/29	0	0.0	7.0	0.1 h
Quartz Mountain (PP&L)	5504	4/29	0	0.0	10.6	0.0 m
Seven Lakes #1	6800	c				
Seven Lakes #2	6200	c				
State Line (Calif.)	5750	c				
Strawberry	5760	4/25	0	0.0	11.2	0.4 h
Summer Rim	7200	4/25	12	5.4	26.5	- -
Sun Mountain	5350	4/23	20	8.6	29.5	- -
Sycan Flat	5500	c				
Taylor Butte	5100	c				
Yamsey (PP&L)	4600	c				

"The Conservation of Water begins with the Snow Survey"

WATER SUPPLY OUTLOOK
LAKE COUNTY, GOOSE LAKE WATERSHEDS
OREGON

as of
MAY 1, 1968

U. S. D. A. SOIL CONSERVATION SERVICE
OREGON STATE UNIVERSITY ··· OREGON STATE ENGINEER

GENERAL OUTLOOK

Most farmers, ranchers and other water users in Lake County will have an extremely poor water supply this summer except for the Lakeview Water Users Association which will have a fair supply. Nearly record low streamflow is forecast for Lake County, comparing to the low flows of 1939 and 1959.

SNOW COVER and PRECIPITATION

Snow in Lake County has now vanished except at the highest elevations. Snow was found only at Summer Rim and Patton Meadows snow courses.

Winter precipitation, November through March, was 68 percent of average. This dry trend continued into the spring with 42 percent of average precipitation in April, according to the U. S. Weather Bureau.

RESERVOIR STORAGE

Drews Reservoir currently contains 47,600 acre feet compared to last year's 53,100 acre feet. Cottonwood is holding 3,600 acre feet. Thompson Valley Reservoir on April 25th contained 13,700 acre feet compared to 16,600 last year.

STREAMFLOW

Forecasted streamflows with comparable low flow years are as follows:

Stream Station	Apr.-June 1968 Forecast	% of Avg. 1948-62	Observed 1939	%	Observed 1959	%
Chewaucan near Paisley	35	44	28	35	30	38
Deep above Adel	25	37	23	34	23	34
Drews Res. net Inflow (May-Sept.)	2.0	18	0.1	1	0	0
Honey near Plush	3.4	22	3.4	22	3.6	23
Silver Cr. nr. Silver Lk.(May-Jul)	3.6	30	2.0	17	5.4	45
Twentymile near Adel	4.0	19	-	-	4.9	23

These forecasts assume average temperatures and precipitation will occur from now to the end of the forecast period.

Report prepared by
W.T. FROST AND TOM GEORGE
U.S. DEPARTMENT OF AGRICULTURE - SOIL CONSERVATION SERVICE
1218 S.W. WASHINGTON ST.
PORTLAND, OREGON 97205

WATER SUPPLY OUTLOOK expressed as "Poor", "Foir" "Averoge" or "Excellent"

STREAM or AREA	FLOW PERIOD	
	SPRING SEASON	LATE SEASON
Chewaucan	Spring peak flows are past.	Poor
Crooked Creek		Poor
Deep Creek		Poor
Dry Creek		Poor
East Side Goose Lake		Poor
Guano Lake		Poor
Honey Creek		Poor
Lakeview Water Users Assn.		Fair
Rock Creek (Hart Mtn.)		Poor
Silver-Buck Creeks		Poor
Summer Lake		Poor
Thomas Creek		Poor
Twentymile Creek		Poor
Warner Lakes		Poor

RESERVOIR STORAGE (1,000 Ac. Ft.) May 1, 1968

RESERVOIR	USABLE CAPACITY	MEASURED (First of Month)		
		THIS YEAR	LAST YEAR	1948-62 AVERAGE
Cottonwood	8.7	3.6	3.7	5.8*
Drews	63.0	47.6	53.1	53.0
Thompson Valley	17.4	13.7**	16.6	11.0 [m]

*Average for years of record after reconstruction.

**As of 4-25-68.

STREAMFLOW FORECASTS [a] (1,000 Ac. Ft.) as of May 1, 1968

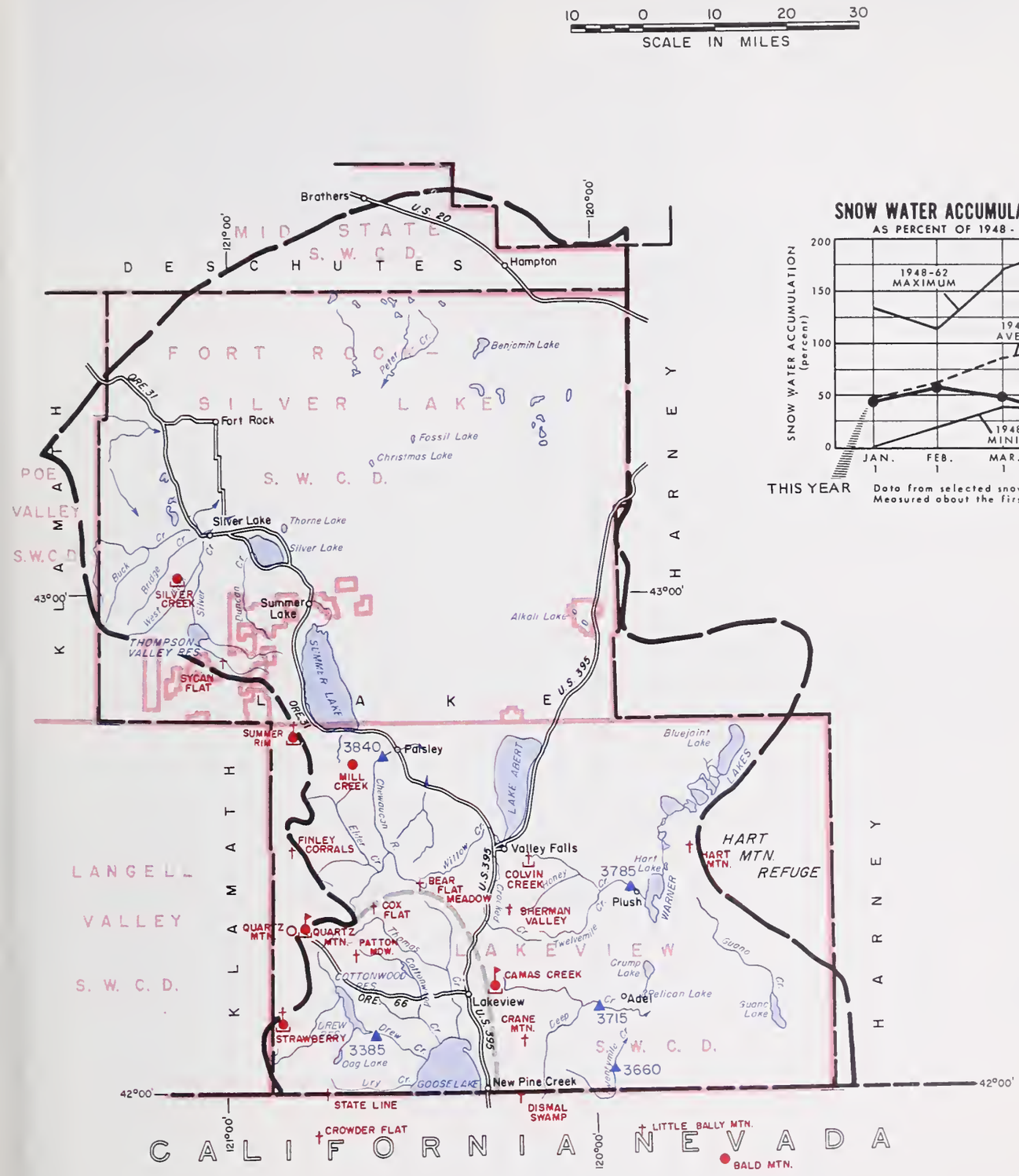
FORECAST POINT		FORECAST THIS YEAR	FORECAST PERIOD	1948-62 AVERAGE	THIS YEAR AS PERCENT OF AVERAGE [i]
NO.	NAME				
3840	Chewaucan near Paisley	35	April-June	79	44
		40	April-Sept.	88	45
3715	Deep above Adel	25	April-June	68	37
		27	April-Sept.	72	38
3385	Drews Reservoir net Inflow [d]	2.0	May-Sept.	11.4	18
3785	Honey near Plush	3.4	April-June	15.6	22
		3.6	April-Sept.	16.1	22
3900	Silver Creek near Silver Lake	3.6	May-July	12.0	30
		3.8	May-Sept.	13.8	28
3660	Twentymile near Adel	4.0	April-June	21	19
		4.5	April-Sept.	22	20

SOIL MOISTURE

STATION		PROFILE (Inches)		SOIL MOISTURE (Inches)			
NAME	ELEVATION	DEPTH	CAPACITY	DATE	THIS YEAR	LAST YEAR	2 YEARS AGO
Camas Creek	5720	42	14.5	5/1	12.8	12.7	13.1
Quartz Mountain	5320	48	15.3	4/29	8.6	9.8	9.0

(a) Assuming normal meteorological conditions. (b) No report. (c) Not scheduled. (d) Corrected to natural flow. (e) Aerial snow depth gage, water content estimated. (f) Nearest current data. (g) Partly estimated. (h) 1948-62 adjusted average. (i) 1948-62, 15 year average. (j) Telephonic report - data not confirmed. (k) Data from PP&L Co. or USBR records. (m) Average for 5 or more years in base period.

LAKE COUNTY, GOOSE LAKE WATERSHEDS



LEGEND

- Watershed Boundary
- Sub-watershed Boundary
- Soil Conservation District Bdry.
- County Boundary
- Forecast Point
- Snow Course
- Aerial Snow Depth Gage
- COPCO Snow Station
- Soil Moisture Station
- Precipitation Gage

SNOW

SNOW COURSE		CURRENT INFORMATION			PAST RECORD	
					WATER CONTENT (Inches)	
NAME	ELEVATION	DATE OF SURVEY	SNOW DEPTH (Inches)	WATER CONTENT (Inches)	LAST YEAR	1948-62 AVERAGE
Adin Mountain (Calif.)	6350	5/2	0	0.0	22.5	3.1 [m]
Bald Mountain (Nev.)	6720	[c]				
Bear Flat Meadow [e]	5900	[c]				
Camas Creek	5720	5/1	0	0.0	13.1	- -
Cedar Pass (Calif.)	7100	4/29	14	6.0	22.3	9.6
Colvin Creek [e]	6550	[c]				
Cox Flat [e]	5750	[c]				
Crane Mountain [e]	6020	[c]				
Crowder Flat [e] (Calif.)	5200	[c]				
Dismal Swamp [e] (Calif.)	7000	[c]				
Finley Corrals [e]	6000	4/25	0	0.0	17.0	- -
Hart Mountain [e]	6350	[c]				
Little Bally Mountain (Nev.)	6600	[c]				
Mill Creek	6200	[c]				
Patton Meadows [e]	6800	4/25	9	4.0	23.8	- -
Quartz Mountain (PP&L)	5504	4/29	0	0.0	10.6	0.0 [m]
Quartz Mountain	5320	4/29	0	0.0	7.0	0.1 [h]
Sherman Valley [e]	6600	[c]				
Silver Creek	4900	[c]				
State Line [e] (Calif.)	5750	[c]				
Strawberry	5760	4/25	0	0.0	11.2	0.4 [h]
Summer Rim [e]	7200	4/25	12	5.4	26.5	- -
Sycan Flat [e]	5500	[c]				

"The Conservation of Water begins with the Snow Survey"

WATER SUPPLY OUTLOOK
HARNEY BASIN WATERSHEDS
OREGON

as of
MAY 1, 1968

U. S. D. A. SOIL CONSERVATION SERVICE
OREGON STATE UNIVERSITY ··· OREGON STATE ENGINEER

GENERAL OUTLOOK

Drastically low streamflows will severely cripple livestock and other agricultural operations this summer in Harney County. If unusually hot and dry weather conditions, similar to last summer, should recur some streams in Harney County may establish new record lows.

SNOW COVER and PRECIPITATION

Snow cover in Harney County has entirely vanished except at the very highest elevations. Winter precipitation, November through March, as reported by the U. S. Weather Bureau was 58 per cent of average. This dry trend continued on into the spring with April precipitation only 25 per cent of average.

STREAMFLOW

Forecasted streamflow with comparable low flow years are as follows:

Stream Station	Apr.-June 1968 Forecast	% of Avg. 1948-62	Observed 1959	%	Observed 1966	%
Donner und Blitzen	13,000	25	22,700	43	19,000	36
Silver near Riley (Apr.-July)	3,200	14	5,270	24	6,460	29
Silvies near Burns	13,000	14	24,000	25	28,400	29
Trout near Denio	2,000	27	2,400	32	2,700	36

These forecasts assume average temperatures and precipitaion from now until the end of the forecast period.

Report prepared by
W.T. FROST AND TOM GEORGE
U.S. DEPARTMENT OF AGRICULTURE - SOIL CONSERVATION SERVICE
1218 S.W. WASHINGTON ST.
PORTLAND, OREGON 97205

WATER SUPPLY OUTLOOK expressed as "Poor", "Fair" "Average" or "Excellent"

STREAM or AREA	FLOW PERIOD	
	SPRING SEASON	LATE SEASON
Catlow Valley	Spring peak flows are past.	Poor
Cow Creek		Poor
Donner und Blitzen River		Poor
Mill-Coffeepot Creeks		Poor
Rattlesnake Creek		Poor
Silver Creek		Poor
Silvies River		Poor
Soldier-Prather Creek		Poor
Trout Creek		Poor
Whitehorse Creek		Poor

RESERVOIR STORAGE (1,000 Ac. Ft.) May 1, 1968

RESERVOIR	USABLE CAPACITY	MEASURED (First of Month)		
		THIS YEAR	LAST YEAR	1948-62 AVERAGE

STREAMFLOW FORECASTS[a] (1,000 Ac. Ft.) as of May 1, 1968

FORECAST POINT		FORECAST THIS YEAR	FORECAST PERIOD	1948-62 AVERAGE	THIS YEAR AS PERCENT OF AVERAGE[i]
NO.	NAME				
3960	Donner und Blitzen near Frenchglen	13.0	April-June	52	25
		15.0	April-Sept.	62	24
4030	Silver near Riley	3.2	April-July	22	14
3935	Silvies near Burns	13	April-June	96	14
		15	April-Sept.	99	15
4065	Trout near Denio	2.0	April-June	7.4	27
		2.5	April-Sept.	8.4	30

SOIL MOISTURE

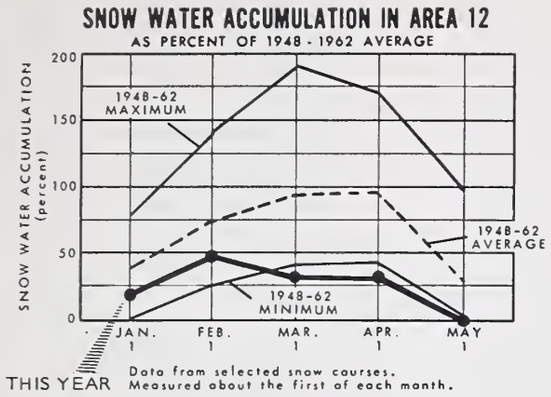
STATION		PROFILE (Inches)		SOIL MOISTURE (Inches)			
NAME	ELEVATION	DEPTH	CAPACITY	DATE	THIS YEAR	LAST YEAR	2 YEARS AGO
Blue Mountain Spring	5900	42	16.9	5/1	12.9	12.1	12.8
Fish Creek	7900	48	15.0	b			
Folly Farm	4450	30	12.5	b			
Silvies	6900	48	16.4	b			
Snow Mountain	6300	48	16.7	b			
Starr Ridge	5150	36	10.6	5/1	10.5	10.5	10.4
Stinking Water	4800	48	21.9	b			
Willow-Bald	5000	24	6.6	4/26	4.2	6.6	- -

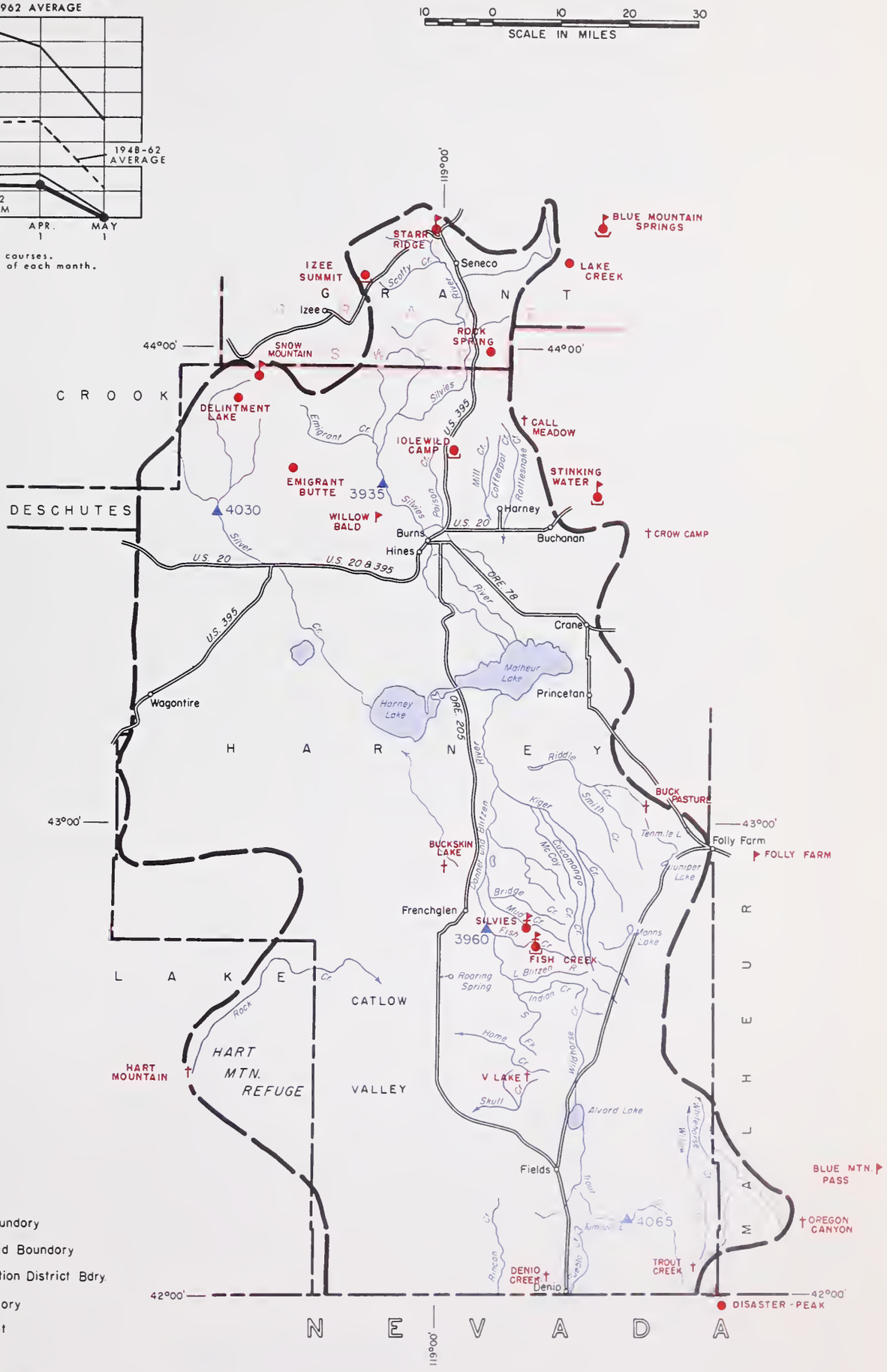
SNOW

SNOW COURSE		CURRENT INFORMATION			PAST RECORD	
NAME	ELEVATION	DATE OF SURVEY	SNOW DEPTH (Inches)	WATER CONTENT (Inches)	WATER CONTENT (Inches) LAST YEAR	WATER CONTENT (Inches) 1948-62 AVERAGE
Blue Mountain Springs	5900	5/1	0	0.0	17.5	7.8[m]
Buck Pasture	5700	c				
Buckskin Lake	5200	c				
Call Meadows	5340	c				
Crow Camp	5500	c				
Delintment Lake	5600	c				
Denio Creek	6000	c				
Disaster Peak (Nev.)	6500	c				
Emigrant Butte	5000	c				
Fish Creek	7900	c				
Hart Mountain	6350	c				
Idlewild Camp	5200	5/1	0	0.0	5.6	- -
Izee Summit	5293	5/1	0	0.0	7.1	1.6[m]
Lake Creek	5120	c				
Oregon Canyon	6950	c				
Rock Spring	5100	5/1	0	0.0	2.9	- -
Silvies	6900	c				
Snow Mountain	6300	c				
Starr Ridge	5150	5/1	0	0.0	2.5	0.4[h]
Stinking Water	4800	b				
Trout Creek	7800	c				
"V" Lake	6600	c				

(a) Assuming normal meteorological conditions. (b) No report. (c) Not scheduled. (d) Corrected to natural flow. (e) Aerial snow depth gage, water content estimated. (f) Nearest current data. (g) Partly estimated. (h) 1948-62 adjusted average. (i) 1948-62, 15 year average. (j) Telephonic report - data not confirmed. (k) Data from PP&L Co. or USBR records. (m) Average for 5 or more years in base period.

HARNEY BASIN WATERSHEDS





LEGEND

- Watershed Boundary
- Sub-watershed Boundary
- Soil Conservation District Bdry.
- County Boundary
- ▲ Forecast Point
- ● Snow Course
- † Aeriol Snow Depth Gage
- ⚑ Soil Moisture Station
- ⌴ Precipitation Gage

"The Conservation of Water begins with the Snow Survey"

OWYHEE, MALHEUR WATERSHEDS (1)

Owyhee River

Number	Name	Sec.	Twp.	Rge.	Elev.
[illegible]	Antelope Ridge (Ida)	20	8S	1E	5900
[illegible]	Battle Creek (Ida)	10	11S	1E	5700
[illegible]	Bear Creek (Nev)	31	46N	58E	7800
[illegible]	Big Bend (Nev)	30	45N	56E	6700
[illegible]	Blue Mtn Pass	4	38S	42E	5290
[illegible]	Buckskin, Lower (Nev)	25	45N	39E	6700
[illegible]	Buckskin, Upper (Nev)	11	45N	39E	7200
[illegible]	Bull Basin (Ida)	29	12S	5W	5600
[illegible]	Columbia Basin (Nev)	31	44N	53E	6650
[illegible]	Disaster Peak (Nev)	8	47N	34E	6500
[illegible]	Fawn Creek (Nev)	2	45N	52E	7000
[illegible]	Fish Creek	4	33S	33E	7900
[illegible]	Folly Farm Summit	8	30S	38E	4450
[illegible]	Fox Creek (Nev)	33	46N	58E	6800
[illegible]	Fry Canyon (Nev)	31	43N	54E	6700
[illegible]	Gold Creek (Nev)	31	45N	56E	6600
[illegible]	Granite Peak (Nev)	22	44N	39E	7800
[illegible]	Hyde Pasture (Ida)	31	8S	2W	5800
[illegible]	Jack Creek, Lower (Nev)	18	42N	53E	6800
[illegible]	Jack Creek, Upper (Nev)	9	42N	53E	7250
[illegible]	Jack Peak (Nev)	28	42N	53E	8420
[illegible]	Jordan Valley	0	30S	46E	4390
[illegible]	Lamance Creek (Nev)	13	42N	38E	6000
[illegible]	Laurel Draw (Nev)	20	45N	53E	6700
[illegible]	Lookout Butte	2	40S	47E	5650
[illegible]	Louse Canyon	27	40S	44E	6440
[illegible]	Martin Creek (Nev)	18	44N	40E	6700
15H20a	Marritt Mountain (Nev)	10	46N	54E	7000
16H3AP	Midas (Nev)	18	39N	46E	7200
16G7M	Mud Flat (Ida)	34	9S	2W	5500
17C5a	Oregon Canyon	8	40S	40E	6950
17H6a	Quinn Ridge (Nev)	9	47N	41E	6300
16G11ap*	Red Canyon (Ida)	32	11S	4W	6500
15H6MP	Rodeo Flat (Nev)	36	43N	53E	6800
15H3A	76 Craek (Nav)	6	44N	58E	7100
16F3AP*	Silver City (Ida)	6	5S	3W	6400
18G1MA	Silvies	35	32S	32¾E	6900
16G1	South Mountain No.2 (Ida)	10	2S	5W	6340
16F6a	Succor Creek (Ida)	25	3S	5W	6100
15H9MP	Taylor Canyon (Nev)	35	39N	53E	6200
16H7a	Toa Jam (Nev)	29	40N	50E	7700
15H8	Tremewan Ranch (Nev)	9	39N	55E	5700
16G4MA	Triangla (Ida)	25	7S	3W	5150
18G5a	Trout Creek	10	41S	38E	7800
18G7a	"Y" Lake	31	35½S	32¾E	6600
16G12a	Vaught Ranch (Ida)	10	11S	1W	5950
16G13a	War Eagle (Ida)	20	5S	3W	7700

Malheur River

Number	Name	Sec.	Twp.	Rge.	Elev.
18E14	Sarney Creek	16	14S	36E	5950
18E16MP	Blue Mountain Spring	21	15S	35E	5900
18F6a	Buck Pastura	21	29S	35E	5700
18E21a	Bully Craak	10	17S	37E	5300
18F7a	Call Meadows	29	20S	33E	5340
17F2a	Cottonwood-Indian	10	19S	39E	4320
18E19M	Crana Prairia	24	16S	34E	5375
18F8a	Crow Camp	Unsurveyed (2)			
18E20	Eldorado Pass	20	14S	38E	4600
18E26a	Flag Prairie	32	16S	36E	4750
18E18	Lake Creek	10	16S	33½E	5120
18E22a	Logan Valley	13	16S	33½E	5100
18F1	Rock Spring	23	18S	32E	5100
18E32p*	S. Fk. Willow Cr.	2	16S	37E	5500
18F4MP	Stinking Water	33	21S	34E	4800

BURNT, POWDER, PINE, GRANDE RONDE, IMNAHA WATERSHEDS

Burnt River

Number	Name	Sec.	Twp.	Rge.	Elev.
18E14	Sarnay Creek	16	14S	36E	5950
18E13M	Blue Mountain Summit	6	12S	36E	5098
17E1MP	Doolay Mountain	32	11S	40E	5430
18E20	Eldorado Pass	20	14S	38E	4600
18E8	Cold Center	21	9S	36E	5340
18E9	Tipton	34	10S	35½E	5100

Powder River

Number	Name	Sec.	Twp.	Rge.	Elev.
18E1	Anthony Laka	18	7S	37E	7125
18E33	Anthony Ski Hill				
18E5	Sourne	33	8S	37E	5800
17E1MP	Doolay Mountain	32	11S	40E	5430
18E3	Eilertson Meadows	18	8S	38E	5400
18E8	Gold Center	21	9S	36E	5340
18E6A	Goodrich Laka	4	9S	38E	6775
18E29	Intake House	5	8S	38E	4930
17D12m	Ladd Summit	5	5S	39E	3730
18E23	Little Alps	10	7S	37E	6200
18E30	Little Antone	1	7S	37E	5000
18E28	Powar Plant	33	7S	38E	3990
17D7	Taylor Creen	3	6S	42E	5740

Pine Creek

Number	Name	Sec.	Twp.	Rge.	Elev.
17D8	Schneider Meadows	35	6S	45E	5400

Grande Ronde River

Number	Name	Sec.	Twp.	Rge.	Elev.
17D1	Aneroid Lake No. 1	16	4S	45E	7480
17D2P	Aneroid Lake No. 2	16	4S	45E	7300
18E1	Anthony Lake	18	7S	37E	7125
17D10a	Bald Mountain	14	4S	41E	6700
18D9	Beaver Reservoir	8	5S	37E	5340
18D8P	County Line	28	4S	34E	4800
18D6P	Lucky Strike	28	3S	32E	5050
18D5	Meacham	24 & 25	1S	35E	4300
17D13a	Mirror Lake	34	4S	44E	8200
17D6M	Moss Spring	28	3S	41E	5850
18D7	Schoolmarm	28	4S	34E	4775
17D11a	Standlay	28	2S	42E	7400
17D7	Taylor Green	3	6S	42E	5740
18D3M	Tollgate	31	4N	38E	5070
17D15a	TV Ridge	12	2S	43E	7000

Imnaha River

Number	Name	Sec.	Twp.	Rge.	Elev.
17D1	Aneroid Lake No. 1	16	4S	45E	7480
17D2P	Aneroid Lake No. 2	16	4S	45E	7000
17D14a	Big Sheep	33	4S	46E	6200

UMATILLA, WALLA WALLA, WILLOW, ROCK, LOWER JOHN DAY WATERSHEDS (3)

Umatilla River

Number	Name	Sec.	Twp.	Rge.	Elev.
19D2P	Arbuckle Mountain	33	4S	29E	5400
18D14m	Athena-Weston Summit	21	4N	35E	1700
18D12MP	Battle Mountain Summit	29	3S	31E	4340
18D4M	Emigrant Springs	29	1N	35E	3925
18D6P	Lucky Strike	28	3S	32E	5050
18D5	Meacham	24 & 25	1S	35E	4300
18D3M	Tollgate	32	4N	38E	5070
18D13	Walla Walla Diversion	22	6N	33E	2400

Walla Walla River

Number	Name	Sec.	Twp.	Rge.	Elev.
18D16	Blue Mountain Camp	35	4N	37E	4300
18D3M	Tollgate	32	4N	38E	5070
18D17	Weston Mountain	25	4N	35E	2700

Willow Creek

Number	Name	Sec.	Twp.	Rge.	Elev.
19D2P	Arbuckle Mountain	33	4S	29E	5400
18E1P	Anthony Lake	18	7S	37E	7125

UPPER JOHN DAY WATERSHEDS (4)

Upper John Day River

Number	Name	Sec.	Twp.	Rge.	Elev.
19D2P	Arbuckle Mountain	33	4S	29E	5400
18D12MP	Battle Mountain Summit	29	3S	31E	4340
19E24	Beech Creek Summit	4	12S	30E	4800
18E16MP	Blue Mountain Spring	21	15S	35E	5900
18E13M	Blue Mountain Summit	6	12S	36E	5098
19E3MP	Derr	14	13S	23E	5670
18E27a	East Fork Canyon	15	15S	32E	5700
18E8	Gold Center	21	9S	36E	5340
18E24a	Indian Cr. Butte	5	15S	33E	6550
19E9P	Izee Summit	28	16S	29E	5293
18D6P	Lucky Strike	28	3S	32E	5050
20E1MP	Marks Creek	25	12S	19E	4540
20E2	Ochoco Meadows	21	13S	20E	5200
18E7	Olive Lake	14	9S	34E	6000
18D7	Schoolmarm	28	4S	34E	4775
19F1M	Snow Mountain	1	19S	26E	6300
19E7M	Starr Ridge	20	15S	31E	5150
18E9	Tipton	34	10S	35½E	5100
18E25MP	Williams Ranch	20	15S	32E	4500

UPPER DESCHUTES, CROOKED WATERSHEDS (5)

Upper Deschutes River

Number	Name	Sec.	Twp.	Rge.	Elev.
21E11	Slack Pine Spring	14	16S	9E	4600
21F8	Caldwell Ranch	30	21S	8E	4400
22F3	Cascade Summit	7	23S	6E	4880
21F11	Chemult	21	27S	8E	4760
21F20P	Deer Creek	25	20S	7E	4554
21F14	Fire Road	36	21S	11E	5050
21E6	Hogg Pass	24	13S	7½E	4755
21F4	Hungry Flat	30	18S	11E	4400
21F6*	Irish-Taylor	25	20S	6E	5500
21F17	Mowich	29	25S	25E	4700
21F10	New Crescent Laka	11	24S	6E	4800
21F19P	New Dutchman Flat #2	21	18S	9E	6400
21F13P	Paulina Lake	34	21S	12E	6330
21F15	Paulina Prairie	28	21S	11E	4285
21F3	Tangent	28	18S	10E	5400
21E15	Three Creeks Butta	27	16S	9E	5200
21E13	Three Creek Meadows	34	16S	9E	5650
22F2P	Waldo Laka	15	21S	6E	5500
22F14*	Willamatte Pass	33	24S	5½E	5600
22F15	Windigo Pass	32	25S	6E	5800

Crooked River

Number	Name	Sec.	Twp.	Rge.	Elev.
19E3MP	Derr	14	13S	23E	5670
20E1MP	Marks Creek	25	12S	19E	4540
20E2	Ochoco Meadows	21	13S	20E	5200
19F1M	Snow Mountain	1	19S	26E	6300
19E4	Tamarack	8	15S	25E	4800

HOOD, MILE CREEKS LOWER DESCHUTES WATERSHEDS (6)

Hood River

Number	Name	Sec.	Twp.	Rge.	Elev.
21D6P	Brooks Meadows	2	2S	10E	4300
21D25M	Cooper Spur	6	2S	10E	3490
21D1	Greenpoint Reservoir	28	2N	9E	3400
21D20	Knebal Springs	31	1S	11E	3850
21D23	Parkdele	6	1S	10E	1770
21D8*	Phlox Point	6	3S	9E	5600
21D4	Red Hill	20	1S	9E	4400
21D9	Still Creek	25	3S	8½E	3700
21D7	Tilly Jane	15	2S	9E	6000
21D21	Ulrich Ranch Junction	28	1S	11E	3350
21D30	Umbrella Falls	3	3S	9E	5400
21D24	Upper Valley	20	1S	10E	2530
21D28	Switchback	28	1S	9E	3255

Mile Creeks - Mosier Creek

Number	Name	Sec.	Twp.	Rge.	Elev.
21D6P	Brooks Meadows	2	2S	10E	4300
21D20	Knebal Springs	31	1S	11E	3850
21D21	Ulrich Ranch Junction	28	1S	11E	3350

Lower Deschutes River

Number	Name	Sec.	Twp.	Rge.	Elev.
21D12	Clear Lake	29	4S	9E	3500
21D22	Clear Lake Experimental	29	4S	9E	3500
21E6	Hogg Pass	24	13S	7½E	4755

LOWER COLUMBIA WATERSHEDS (7)

Sandy River

Number	Name	Sec.	Twp.	Rge.	Elev.
21D8*	Phlox Point	6	3S	9E	5600
21D9	Still Creek	25	3S	8½E	3700

WILLAMETTE WATERSHEDS (8)

Clackamas River

Number	Name	Sec.	Twp.	Rge.	Elev.
21D15	Big Bottom	25	6S	7E	2118
21D13	Clackamas Laka	35	5S	8½E	3400
21D12	Clear Lake	29	4S	9E	3500
21D16	Lake Harriet	4	6S	7E	2045
21D14*	Peavine Ridge	14 & 15	6S	7E	3500
21D8*	Phlox Point	6	3S	9E	5600
21D9	Still Greek	25	3S	8½E	3700
21D17	Timothy Lake	26	5S	8E	3295

Santiam River

Number	Name	Sec.	Twp.	Rge.	Elev.
22E1	Detroit (town)	1	10S	5E	1610
22E2	Detroit Dam	7	10S	5E	1580
21E6	Hogg Pass	24	13S	7½E	4755
21E4	Marion Forks	28	11S	7E	2730
22E3	Mill City	29	9S	3E	826
21E5	Santiam Junction	14	13S	7E	3990
21E3	Whitewater Bridge	28	10S	7E	2175

McKenzie River

Number	Name	Sec.	Twp.	Rge.	Elev.
21E8	Dead Horsa Grade	13	16S	7E	3800
22E4	Lost Creek Ranch	24	16S	6E	1956
21E7	McKenzie	35	15S	7½E	4800
22E5	McKenzie Bridge	13	16S	5E	1372
22E6	Vida	28	16S	2E	800
21E9	White Branch Slide	15	16S	7E	2800

Middle Fork Willamette River

Number	Name	Sec.	Twp.	Rge.	Elev.
22F3	Cascade Summit	7	23S	6E	4880
22F6	McCredie Springs	16	21S	4E	2120
22F8	Meridian Dam	13	19S	1W	[illegible]
22F7	Oakridge	10	21S	3E	1310
22F5	Railroad Overpass	21	22S	5E	2750
22F4	Salt Creek Falls	32	22S	5½E	4000
22F2P	Waldo Lake	15	21S	6E	5500
22F14*	Willamette Pass	33	24S	5½E	5600

Coast Fork Willamette River

Number	Name	Sec.	Twp.	Rge.	Elev.
22F9	Champion	12	23S	1E	4500
22F10	Golden Curry Creek	1	23S	1E	[illegible]
22F13	Layng Creek R. S.	31	21S	1E	1200
22F12	Lund Park	22	22S	1E	[illegible]
22F11	Weaver Creek	35	22S	1E	[illegible]

Mary's River

Number	Name	Sec.	Twp.	Rge.	Elev.
23E1	Mary's Peak	21	12S	7W	[illegible]

ROGUE, UMPQUA WATERSHEDS (9)

Rogue River

Number	Name	Sec.	Twp.	Rge.	Elev.
23G4	Althouse	17	41S	7W	[illegible]
22G6	Annie Spring	19	31S	6E	6018
22G28	Beaver Dam Creek	1	38S	4E	5100
22G21P	Big Red Mountain	31	40S	1W	[illegible]
22G13	Billie Creek Divide	30	36S	5E	5300
22G33	Caliban	16	40S	1E	6500
22G27	Deadwood Junction	8	38S	4E	4600
22F19	Diamond-Crater Summit	34	28S	6E	5800
22G14P	Fish Lake	1	37S	4E	4865
22G12	Fourmile Lake	9	36S	5E	6000
23G3	Grayback Peak	9	40S	5W	6000
22G26	Howard Prairie	32	38S	4E	4500
22G16	Hyatt Prairie Reservoir	15	39S	3E	4900
23G8	King Mountain No. 1	8	33S	4W	4800
23G9	King Mountain No. 2	33	32S	4W	3646
23G10	King Mountain No. 3	29	32S	4W	2550
23G11	King Mountain No. 4	20	32S	4W	1779
22G22	Little Red Mountain	25	40S	2W	6500
22G31	Mt. Ashland Switchback	15	40S	1E	6400
23G5	Page Mountain	8	41S	7W	4045
22G5	Park Headquarters	8	31S	6E	6450
22G10P	Seven Lakes No. 1	3	34S	5E	6800
22G11	Seven Lakes No. 2	26	33S	5E	6700
22G2	Silver Burn	30	30S	4E	3720
22G20	Siskiyou Summit	17	40S	2E	4630
22G32	Ski Bowl Road	22	40S	1E	6000
22G9	South Fork Canal	12	33S	4E	3500
22G1	Whaleback	3	31S	2E	5140

Umpqua River

Number	Name	Sec.	Twp.	Rge.	Elev.
22F9	Champion	12	23S	1E	4500
22F18P	Diamond Lake	29	27S	6E	5315
23G7	Eden Valley Summit	10	32S	10W	2390
22F16	North Umpqua	19	26S	6E	4215
22F23	Red Butte No. 1	36	27S	1W	4760
22F24	Red Butte No. 2	30	27S	1W	4000
22F25	Red Butte No. 3	30	27S	1W	[illegible]
22F26	Red Butte No. 4	36	27S	1W	3000
22F27	Red Butte No. 5	20	27S	1W	2500
22F28	Red Butte No. 6	17	27S	1W	2000
22F17	Trap Creek	1	27S	4E	[illegible]
22G1	Whaleback	3	31S	2E	5140
22F15	Windigo Pass	20	25S	6E	5800

KLAMATH WATERSHEDS (10)

Klamath River

Number	Name	Sec.	Twp.	Rge.	Elev.
22G6	Annie Spring	19	31S	6E	6018
22G13	Billie Creek Divide	30	36S	5E	5300
21G5	Bly Mountain	15 & 22	37S	11E	[illegible]
21F11	Chemult	21	27S	8E	4760
22G24	Gold Springs Camp	17	35S	5E	6100
20G12a	Crazyman Flat	9	34S	17E	6100
20H2a	Crowder Flat (Cal)	30	47N	11E	5200
22F19	Diamond-Crater Summit	34	28S	6E	5800
21F18	Diamond Lake Jct. (??)	1	28S	7E	4600
21G6a	Dog Hollow	1	40S	14E	4900
20G14a	Finley Corrals	11	36S	16E	6000
22G12	Fourmile Lake	9	36S	5E	6000
21G4P	Gerber	12	39S	13E	4850
22G16	Hyatt Prairie Reservoir	15	39S	3E	4900
22G26	Howard Prairie	32	38S	4E	4500
22G15	Lake of the Woods	11	37S	5E	4960
22G5	Park Headquarters	8	31S	6E	6450
22G25	Pelican Guard Station	9	36S	6E	4150
20G6MP	Quartz Mountain	2	38S	16E	5320
22G10P	Seven Lakes No. 1	3	34S	5E	6800
22G11	Seven Lakes No. 2	26	33S	5E	6200
20H1a	State Line (Cal)	21	48N	11E	5750
20G9AP	Strawberry	4	40S	16E	5760
20G2AP	Summer Rim	15	33S	16E	7200
21G2	Sun Mountain	22	32S	7½E	5350
20G13a	Sycan Flat	25	31S	14E	[illegible]
21G3	Taylor Butte	22	35S	11E	5100

Pacific Power and Light Company's Snow Stations

Number	Name	Sec.	Twp.	Rge.	Elev.
1	Beatty (PP&L)	22	36S	12E	4300
10	Bly 101 Ranch (PP&L)	22	35S	14E	4600
[illegible]	Chiloquin (PP&L)	34	34S	7E	4187
[illegible]	Crystal (PP&L)	26	34S	6E	4200
[illegible]	Fort Klamath (PP&L)	22	33S	7½E	4150
6	Kirk (PP&L)	1	33S	7E	4533
[illegible]	Quartz Mountain (PP&L)	33	37S	16E	5504
8	Harriman Lodge (PP&L)	3	36S	6E	4200
12	Yamsey (PP&L)	20	31S	11E	4600

LAKE COUNTY, GOOSE LAKE WATERSHEDS (11)

Goose Lake

Number	Name	Sec.	Twp.	Rge.	Elev.
20G15a	Bear Flat Meadow	27	36S	19E	5900
20G8MP	Camas Creek	5	39S	21E	5720
20G11a	Cox Flat	16	37S	18E	5750
20G16a	Crane Mountain	13	40S	21E	6020
20H2a	Crowder Flat (Cal)	30	47N	11E	5200
20H3a	Dismal Swamp (Cal)	11	48N	16E	7200
20G17a	Patton Meadow	28	38S	18E	6800
20G6MP	Quartz Mountain	2	38S	16E	5320
20H1a	State Line (Cal)	21	48N	11E	5750
20G9AP	Strawberry	4	40S	16E	5760

Abert Lake

Number	Name	Sec.	Twp.	Rge.	Elev.
20G15a	Bear Flat Meadow	27	36S	19E	5900
20G18AP	Colvin Creek	12	36S	21E	6450
20G11a	Cox Flat	16	37S	18E	5750
20G14a	Finley Corrals	11	36S	16E	6000
20G4	Mill Creek	1	34S	17E	6200
20G6MP	Quartz Mountain	2	38S	16E	5320
20G10a	Sherman Valley	15	37S	21E	6600

Summer Lake

Number	Name	Sec.	Twp.	Rge.	Elev.
20G2AP	Summer Rim	15	33S	16E	7200

Silver Lake

Number	Name	Sec.	Twp.	Rge.	Elev.
21F12P	Silver Creek	25 & 26	29S	13E	4900
20G13a	Sycan Flat	25	31S	14E	5500

Warner Lake

Number	Name	Sec.	Twp.	Rge.	Elev.
20G8MP	Camas Creek	5	39S	21E	5720
20G16a	Crane Mountain	13	40S	21E	6020
20H3a	Dismal Swamp (Cal)	11	48N	16E	7200
19G1a	Hart Mountain	1	36S	25E	6350
20G10a	Sherman Valley	15	37S	21E	6600

Guano Lake

Number	Name	Sec.	Twp.	Rge.	Elev.
19H1	Bald Mountain (Nev)	17	45N	21E	6720
19G1a	Hart Mountain	1	36S	25E	6350
19H4a	Little Bally Mt. (Nev)	8	45N	19E	6600

HARNEY BASIN WATERSHED (12)

Silvies River - Silver Creek

Number	Name	Sec.	Twp.	Rge.	Elev.
18F7a	Call Meadows	29	20S	33E	5340
[illegible]	Delintment Lake	28	19S	26E	5600
[illegible]	Emigrant Butte	14	21S	27E	5000
18F3P	Idlewild Camp	27	20S	31E	5200
[illegible]	Izee Summit	28	16S	29E	5293
18F1	Rock Spring	23	18S	32E	5100
19F1M	Snow Mountain	1	19S	26E	6300
19E7M	Starr Ridge	20	15S	31E	5150
18F4MP	Stinking Water	33	21S	34E	4800
19F4a	Willow-Bald	19	22S	29E	5000

Donner Und Blitzen River

Number	Name	Sec.	Twp.	Rge.	Elev.
18F1a	Buck Pasture	21	29S	35E	5700
[illegible]	Fish Creek	4	33S	32¾E	7900
19G1a	Hart Mountain	1	36S	25E	6350
18G1MA	Silvies	35	32S	32¾E	6900
18G7a	"Y" Lake	31	35½S	32¾E	6600

Trout and Whitehorse Creeks

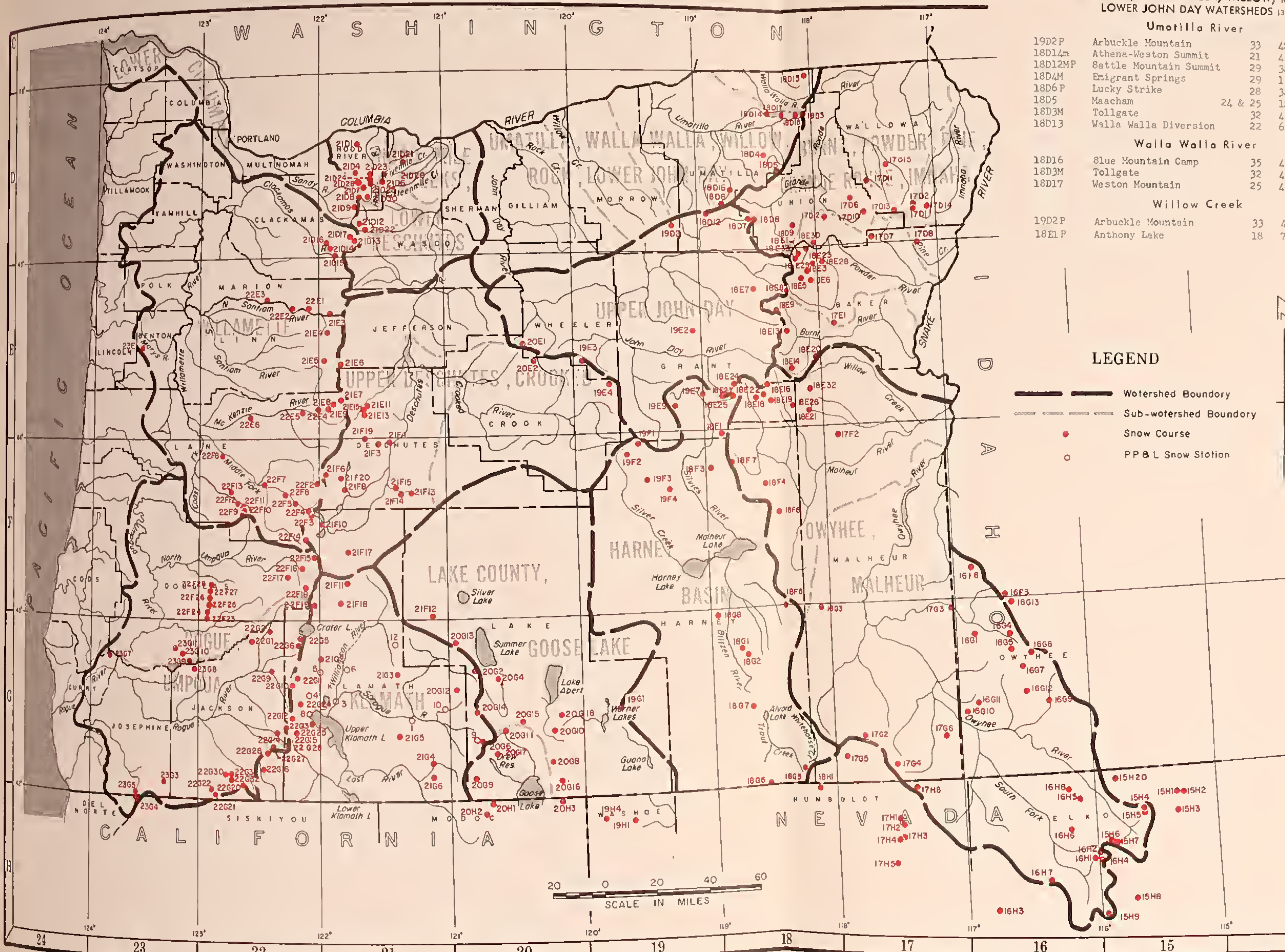
Number	Name	Sec.	Twp.	Rge.	Elev.
18G6a	Denio Creek	14	41S	34E	6000
18H1	Disaster Peak (Nev)	8	47N	34E	6500
17G5a	Oregon Canyon	9	40S	40E	6950
18G5a	Trout Creek	10	41S	38E	7800

Harney Lake

Number	Name	Sec.	Twp.	Rge.	Elev.
18G8a	Buckskin Lake	[illegible]	30S	30E	5200

LEGEND

19D2	SNOW COURSE ONLY
19D2M	SNOW COURSE AND SOIL MOISTURE
19D2MA	SNOW COURSE, SOIL MOISTURE AND AERIAL MARKER
19D2A	SNOW COURSE AND AERIAL MARKER
19D2m	SOIL MOISTURE ONLY
19D2a	AERIAL MARKER ONLY
19D2P	SNOW COURSE AND PRECIPITATION GAGE
19D2p	PRECIPITATION GAGE ONLY
*	RADIO TELEMETRY



Map and Index to OREGON SNOW COURSES

U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE USDA-SCS-PORTLAND, OREG 1965 M-1874

The Following Organizations Cooperate in the Oregon Snow Survey Work

STATE
- Idaho Cooperative Snow Surveys
- Nevada Cooperative Snow Surveys
- Oregon State University
- Oregon State Engineer and Corps of State Watermasters
- Oregon State Highway Engineers
- Soil and Water Conservation Districts of Oregon

COUNTY
- Douglas County Water Resources Survey

FEDERAL
- Department of Agriculture
  - Cooperative Extension Service
  - Forest Service
  - Soil Conservation Service
- Department of Commerce
  - Weather Bureau
- Department of the Interior
  - Bonneville Power Administration
  - Bureau of Land Management
  - Bureau of Reclamation
  - Fish and Wildlife Service
  - Geological Survey
  - National Park Service
- Department of National Defense
  - Corps of Army Engineers

PUBLIC UTILITIES
- Pacific Power and Light Company
- Portland General Electric Company
- California-Pacific Utilities Company

MUNICIPALITIES
- City of Baker
- City of La Grande
- City of The Dalles
- City of Walla Walla

IRRIGATION DISTRICTS
- Arnold Irrigation District
- Associated Ditch Companies
- Burnt River Irrigation District
- Central Oregon Irrigation District
- East Fork Irrigation District
- Grants Pass Irrigation District
- Hood River Irrigation District
- Jordan Valley Irrigation District
- Juniper Flat Irrigation District
- Lakeview Water Users, Incorporated
- Medford Irrigation District
- Middle Fork Irrigation District
- North Board of Control - Owyhee Project
- North Unit Irrigation District
- Ochoco Irrigation District
- Rogue River Valley Irrigation District
- South Board of Control - Owyhee Project
- Squaw Creek Irrigation District
- Talent Irrigation District
- Tumalo Project
- Vale-Oregon Irrigation District
- Warmsprings Irrigation District

PRIVATE ORGANIZATIONS
- Amalgamated Sugar Company
- The Crag Rats, Hood River, Oregon

UNITED STATES DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE
1218 S.W. WASHINGTON ST.
PORTLAND, OREGON 97205

OFFICIAL BUSINESS

POSTAGE AND FEES PAID
U. S. DEPARTMENT OF AGRICULTURE

FIRST CLASS MAIL

FEDERAL - STATE - PRIVATE

COOPERATIVE SNOW SURVEYS

Furnishes the basic data necessary for forecasting water supply for irrigation, domestic and municipal water supply, hydro-electric power generation , navigation , mining and industry

"The Conservation of Water begins with the Snow Survey"